

# SMART AND SHARED CITIES SYMPOSIUM 2023

CENTRE FOR  
**BOLD  
CITIES**



Universiteit  
Leiden  
The Netherlands

  
**TU Delft**

Erasmus  
University  
Rotterdam



# WELCOME

This is the first edition of the annual Smart and SHARED Cities Symposium. During this symposium, the students from the Leiden - Delft - Erasmus minor Smart and SHARED Cities will present the results of the fifth and finale module to their project commissioner.

The minor Smart and SHARED Cities highlights the smart city theme from various disciplines. The program consists of a combination of data science, public administration, urban studies, and social sciences. Students learn about the opportunities offered by new technology and about the social issues that arise from it.

In module 5, Research Participation and Projects, students work in multidisciplinary project teams on a research assignment. Each research assignment is provided by a commissioner; an external researcher or organisation affiliated with the Centre for BOLD Cities. The assignments focus on the societal, social and market aspects of the application of technology in the urban environment. The complexity of the problem and the public environment in which the problem is addressed requires a responsible innovation project. That means, for example, that all stakeholders are distinguished and considered. Students function as academic consultants and report and present their findings to the project commissioner.

The symposium will be moderated by prof. dr. Roland Ortt, module manager of module 5. Furthermore, prof. dr. Liesbet van Zoonen will say a word of welcome and Merlina Slobtoom, coordinator of the minor, will present the new BOLD Cities Alumni Network.



Prof. dr. Roland Ortt is endowed professor in Urban Innovation Management at Erasmus University Rotterdam and associate professor of Technology and Innovation Management at the Faculty of Engineering and Management of Delft University of Technology. His research aims to provide insight in innovation processes in an urban environment to contribute with knowledge to strengthening innovations in cities.



Prof. dr. Liesbet van Zoonen is founding director of the Leiden - Delft - Erasmus Centre for BOLD Cities. She combines critical theory, data science, and a deep cultural understanding of the city to investigate the role of citizens in the design and deployment of urban digital technologies.

# ***PROGRAMME***

- 12.00 - 12.15** Walk-in
- 12.15 - 12.25** Opening remarks by prof. dr. Roland Ortt, moderator of the symposium, and a word of welcome by prof. dr. Liesbet van Zoonen, academic director of the Leiden-Delft-Erasmus Centre for BOLD Cities
- 12.25 - 13.25** Presentations 'Creating a Sustainable Smart City'  
*Commissioned by: New Urban Standard, Paviljoen III, and The Green Village*
- 13.45 - 14.45** Presentations 'Smart Urban Technology'  
*Commissioned by: Vera Safronova, The Future Mobility Network, and TechTics*
- 15.05 - 16.05** Presentations 'Smart City Governance and Politics'  
*Commissioned by: Argaleo, Sprinco, and Closer Cities*
- 16.05 - 16.20** Introduction to the BOLD Cities Alumni Network and closing
- 16.30 - 18.00** Networking drinks

# **PRESENTATIONS**

## *Creating a Sustainable Smart City*

### **Citizen's perception of green spaces in urban settings**

Permavoid block technology of the New Urban Standard aids water management and creates green spaces in urban environments. This research aims to capture citizens' perceptions towards such technologies in order to advise New Urban Standard about what they should focus on and how to expand further.

*Presented by:* Sterre van Dongen, Dibyendu Gupta and Quinten Muller

*Commissioner:* New Urban Standard

### **Niche strategies to start selling the innovation 'Pavilion Roof'**

Paviljoen III is a start-up that transforms roof surfaces into modular green roofs. Paviljoen III faces the challenge of bringing 'Pavilion Roof' to the market and applying it more widely. This research identifies barriers to the diffusion of 'Pavilion Roof' and the underlying causes of these barriers. Niche strategies are formulated that can contribute to circumventing the barriers and successfully entering the market.

*Presented by:* Quint Moerenhout, Elizaveta Morozova and Giorgio Piratoni

*Commissioner:* Paviljoen III

### **The Rainwater Toilet**

The Rainwater Toilet flushes with rainwater instead of drinking water, thereby saving a lot of water. This research examines large-scale barriers to the use of the Rainwater Toilet. Are there users who have an interest? What are the causes of other potential users' lack of interest? Stakeholders and their views on the advantages and disadvantages of Rainwater Toilet are distinguished.

*Presented by:* Jaap van Bommel, Gilles van Gent and Douwe de Vries

*Commissioner:* The Green Village

# **PRESENTATIONS**

## *Smart Urban Technology*

### **Debate among different groups of residents about delivery drones**

This research aims to explore the debate on delivery drones in urban environments, focusing on the perspectives of different stakeholders, including municipalities, delivery companies, drone manufacturers, and citizens. Different methods are combined in order to create recommendations for local governments regarding (delivery)drone usage.

*Presented by:* Rogier Roohé, Daniek Scheffers and Michiel Vandermarliere

*Commissioner:* Vera Safronova (Erasmus University Rotterdam)

### **A study about the deployment location of the delivery robot ROSIE 2.0**

Delivery robot ROSIE 2.0 drives on Erasmus University Rotterdam campus to study human-robot interaction. Delivery robots, such as ROSIE 2.0, can potentially play an important role in the future of delivery services. However, they are not yet allowed in public places. This research seeks the most suitable semi-public or private locations for the deployment of ROSIE 2.0.

*Presented by:* Micha Hoogendoorn, Peter van Lagen and Kika van der Schans

*Commissioner:* The Future Mobility Network

### **Exploring functionalities and possible market applications of TechTics' social robots**

TechTics is a start-up that builds socially relevant and sustainable robots. These robots clean beaches while generating awareness. This research focuses on exploring other settings in which the existing technology can be applied. The aim is to generate alternative market applications for the robot.

*Presented by:* Merel Bruijnzeels, Boye van Hunenstijn and Selena Mendez

*Commissioner:* TechTics

# ***PRESENTATIONS***

## ***Smart City Governance and Politics***

### **Data-dashboard for Centrum managers**

This research focuses on the needs and concerns of Centrum managers in the city. Conducted interviews provide insight into the managers' needs and concerns regarding their work. In addition, the research addresses the use of data by Centrum managers and the type of data needed so that data-dashboards of Argaleo can be improved.

*Presented by:* Zoë Abhelakh, Dries Hawinkels and Nikki Schilder

*Commissioner:* Argaleo

### **How to measure social cohesion: a case study of Rotterdam 100Hoog**

The social cohesion of the residents of the building Rotterdam 100Hoog is the focus of this research. The research comprises interviews with the building manager and residents and a literature review. This provides the basis for an advice to Sprinco on how to conduct research on social cohesion in the future.

*Presented by:* Juliëtte van Alst, Steven Barendregt and Alina Bekkering

*Commissioner:* Sprinco

### **Designing a knowledge sharing framework for urban bridges**

A generic knowledge-sharing framework for cities in the domain of urban bridge-building projects is developed for Closer Cities with this research. The aim is to discern the main obstacles cities (and their officials) face when seeking knowledge and experience from other similar (in terms of infrastructure type or city type) projects and how these obstacles can be overcome.

*Presented by:* Amar Mešić, Anne Roos Roohé and Victoria De Rue

*Commissioner:* Closer Cities

# COMMISSIONERS

Creating a Sustainable Smart City

## **New Urban Standard**

After more than twenty-five years of being active in the field of (rain)water management in urban areas, Tree Ground Solutions and Drain Products Europe decided to join forces at the beginning of this year. Under the name New Urban Standard, they continue their mission to create awareness for the value of water and healthy greenery within the urban area.

## **Paviljoen III**

At Paviljoen III they are committed to concretely solving issues surrounding sustainability. To utilize the potential of empty roof space within the city, Paviljoen III is developing a sustainable combi-roof system. The PaviljoenDak transforms a flat roof surface into a modular green roof, on which sustainable installations can easily be installed.

## **The Green Village**

At The Green Village, knowledge and educational institutions, companies, governments and citizens research, experiment, validate and demonstrate their sustainable innovation. The Green Village is testing how users of the rainwater toilet respond to the innovation. By means of the built-in counter it can be measured indicatively how many liters of water will be saved in a year.

## **Vera Safrona**

Vera is an alumna student from the minor Smart and SHARED Cities. She combined her master's degree with working on Urban Air Mobility research commissioned by the Centre for BOLD Cities and the municipality of The Hague. Now, she is working as an Academic Assistant within the Urban Economics and Governance department at IHS, involved in advisory and research activities related to urban policymaking, digitalization, and innovation.

## **The Future Mobility Network**

The Future Mobility Network helps the world on the way towards the mobility of the future. This project is in collaboration with the Dutch Automated Mobility (DAM). This is a company founded from the collaboration of The Future Mobility Network and Rebel Automated Shuttles. DAM was created by combining the different expertise of both parties. A powerful collaboration aimed at realisation.

Smart Urban Technology

# COMMISSIONERS

## TechTics

Techtics is an inspiring start-up that builds societally relevant and sustainable robots. The company develops new tech concepts, creates prototypes, and tests them in practice. An example of such a robot is the Beachbot, a robot that is trained (using AI) to recognize cigarette remains on the beach and remove them as litter. Techtics tries to involve the public with the technology and make them aware of litter. Integrating man and machine and driving the adaptation of new technology is their main focus.

Smart Urban  
Technology

Smart City Governance and Politics

## Argaleo

Argaleo develops and sells ICT services, applications and support for companies and government. It is their mission to create value from data for our customers and users. Economic value and social value. They do this by offering online "Digital Twin" solutions that provide the right insights into social issues.

## Sprinco

Sprinco is engaged in data-oriented issues in the field of housing and living environments. Sprinco uses Urban Analytics to realize better cities and villages. In doing so, they base themselves on the wishes and preferences of the individual citizen. The company sees residents as the largest carriers of information and uses data science techniques to serve them as well as possible with forecasting models.

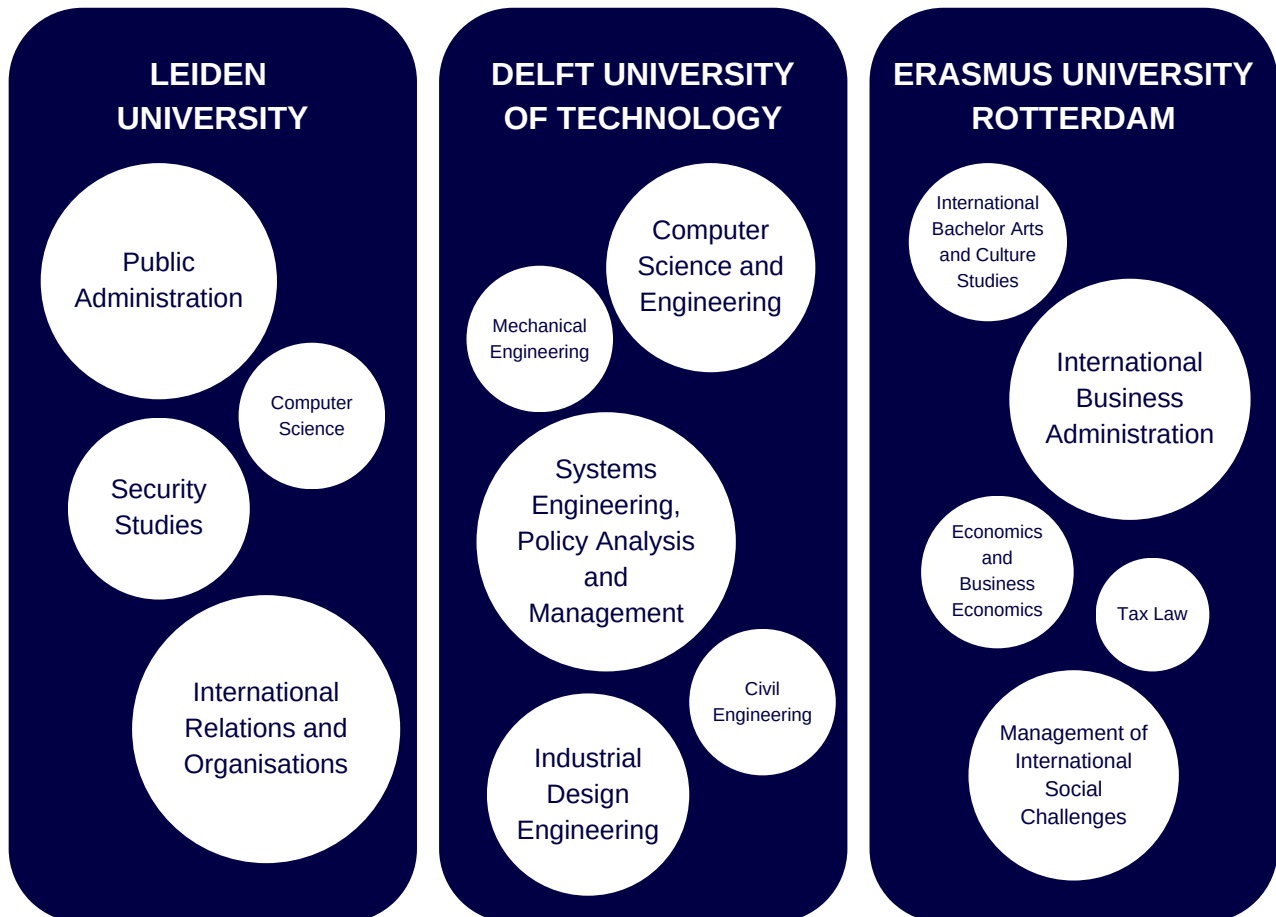
## Closer Cities

Closer Cities is a non-profit initiative, based on partnerships and cross-border collaboration: with knowledge institutions, NGOs, municipalities, governmental institutions and the private sector. Closer Cities is a scientific research project. By analysing urban projects, a better understanding is gained on how to make optimal use of urban knowledge all around the world. The platform should advance urban knowledge transfer and increase the impact of urban initiatives.



# ***STUDENTS***

The students from the Smart and SHARED Cities minor come from nineteen different studies – making our classroom truly interdisciplinary. Below you can find studies from the three universities are represented in our minor.



## **BOLD Cities Alumni Network**

Each year, the minor Smart and SHARED Cities brings together students with a wide variety of disciplines. This allows for rich exchanges and for building an ecosystem that is increasingly representative of the Smart City dynamic. With the BOLD Cities Alumni Network, we build a community and keep the dialogue going, by sharing content and exchanging experiences between participants, alumni, researchers, and professionals within our field.

The BOLD Cities Alumni Network will organize all kinds of activities especially for young alumni. The focus lies on professional and personal development, allowing students to expand their network within the field of smart city projects. More information can be found on our [website](#).

**WANT TO STAY IN TOUCH?**



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