

Stations as Nodes

Edited by
Manuela Triggianese
Roberto Cavallo
Nacima Baron
Joran Kuijper

Contributors
Maarten Van Acker
Marjo van Amerongen
Nacima Baron
Fabrizia Berlingieri
Hans de Boer
Roberto Cavallo
Paul Chorus
Valentina Ciccotosto
Debbie Dekkers
Albane Grandazzi
Maurice Hartevelde
Marcel Hertogh
Serge Hoogendoorn
Kees Kaan
Bachar Kabalan
Yo Kaminagai
Jurgen Krabbenborg
Joran Kuijper
Tom Kuipers
Nils Le Bot
Niels van Oort
Wouter Oostendorp
Joannette Polo
Nico Schiettekatte
Arjan van Timmeren
Fatemeh Torabi Kachousangi
Manuela Triggianese



**exploring the role of stations
in future metropolitan areas
from a French and Dutch
perspective**

**Delft University of Technology,
Faculty of Architecture and the Built Environment**

Delft Deltas, Infrastructures & Mobility Initiative

Amsterdam Institute for Advanced Metropolitan Solutions

Université Paris-Est, École d'Urbanisme de Paris

Stations as Nodes—exploring the role of stations in future metropolitan areas from a French and Dutch perspective

Edited by Manuela Triggianese, Roberto Cavallo, Nacima Baron and Joran Kuijper



Contributors

Maarten Van Acker
Marjo van Amerongen
Nacima Baron
Fabrizia Berlingieri
Hans de Boer
Roberto Cavallo
Paul Chorus
Valentina Ciccotosto
Debbie Dekkers
Albane Grandazzi
Maurice Hartevelde
Marcel Hertogh
Serge Hoogendoorn
Kees Kaan
Bachar Kabalan
Yo Kaminagai
Jurgen Krabbenborg
Joran Kuijper
Tom Kuipers
Nils Le Bot
Niels van Oort
Wouter Oostendorp
Joannette Polo
Nico Schiettekatte
Arjan van Timmeren
Fatemeh Torabi Kachousangi
Manuela Triggianese

Stations as Nodes

Edited by

Manuela Triggianese

Roberto Cavallo

Nacima Baron

Joran Kuijper

**exploring the role of stations
in future metropolitan areas
from a French and Dutch
perspective**

**Delft University of Technology,
Faculty of Architecture and the Built Environment**

Delft Deltas, Infrastructures & Mobility Initiative

Amsterdam Institute for Advanced Metropolitan Solutions

Université Paris-Est, École d'Urbanisme de Paris

This book is published by TU Delft Open,
Faculty of Architecture and the Built Environment,
Delft University of Technology

© 2018 the authors and the Faculty of Architecture
and the Built Environment, Delft University of
Technology. All rights reserved.

ISBN 978-94-6366-140-9

Editorial Board

Manuela Triggianese
Roberto Cavallo
Nacima Baron
Joran Kuijper

Editor in Chief

Manuela Triggianese

Leadership and Coordination

Chair of Complex Projects, Department of Architecture,
Faculty of Architecture and the Built Environment:
Manuela Triggianese and Joran Kuijper

Scientific Committee

dr.arch. Manuela Triggianese (TU Delft, AMS)
prof.dr. Nacima Baron (Université Paris-Est)
dr.arch. Roberto Cavallo (TU Delft, ARENA)
dr.ir. Maurice Hartevelde (TU Delft, AMS)
prof.ir. Kees Kaan (TU Delft, AMS)
prof.dr.ir. Marcel Hertogh (TU Delft, DIMI)
prof.dr.ir. Arjan van Timmeren (TU Delft, AMS)
prof.dr. Bernard Kormoss (ULiège, ARENA)

Contributors

Maarten Van Acker
Marjo van Amerongen
Nacima Baron
Fabrizia Berlingieri
Hans de Boer
Roberto Cavallo
Paul Chorus
Valentina Ciccotosto
Debbie Dekkers
Albane Grandazzi
Maurice Hartevelde
Marcel Hertogh
Serge Hoogendoorn
Kees Kaan
Bachar Kabalan
Yo Kaminagai
Jurgen Krabbenborg
Joran Kuijper
Tom Kuipers
Nils Le Bot
Niels van Oort
Wouter Oostendorp
Joannette Polo
Nico Schiettekatte
Arjan van Timmeren
Fatemeh Torabi Kachousangi
Manuela Triggianese

English editing

D'Laine Camp

Photographers

© Bart Koetsier
© Sebastian van Damme

Design

Joran Kuijper

Special thanks to

All 2018 Summer School and Stations of the Future/
Gares du Futur event participants

and to the support of the organisation

Camille Combe, Joannette Polo, Carolien van Tilburg,
Joan Mols, Esther Hogenhout, Annabelle Michon,
Elise Baeriswyl, Django Beek, Maud Kaan, Esther
Hogenhout, Yasmine Baroudi, Debby Dröge, Judith
Blommaart-Tigchelaar, Salma Ibrahim, Amber
Leeuwenburgh, Jenile Koejoe, Annelies van Rooy,
Onno van het Groenewoud, Willem van Heijningen,
Charlotte Rietdijk and Saksia van Eijk and Tessa
Wijtman-Berkman

and to the moderators and lecturers

Luca Bertolini, Oscar Vos, Ton Venhoeven, Winnie
Daamen, Yo Kaminagai, Jeroen van der Heuvel,
Sebastiaan de Wilde, Ute Schneider, Daan Zandbelt,
Catherine Barbé, Julien Peyron, Gaëlle Pinson, Cécile
Maisonneuve, Marten Wassmann, Arjan Dingsté,
Pauline Marchetti and Miguel Loos

Imagery

© Louise Plantin
© Benthem Crouwel Architects
© KAAAN Architecten
© Sensual City Studio
© Atelier Novembre
© UNStudio
© authors
© Chair of Complex Projects, Department of
Architecture, Faculty of Architecture and the Built
Environment, Delft University of Technology

Cover image

Collage © Joran Kuijper based on a photo of Gare
du Nord by David Iliff used under the CC BY-SA 3.0
Licence, and a photo of Rotterdam Central Station by
Jannes Linders, © BenthemCrouwel Architects

▼
Highways (blue) and rail-
ways, metro- and tram lines
(red) Map by Jorán Kuijper
and Manuela Triggianese

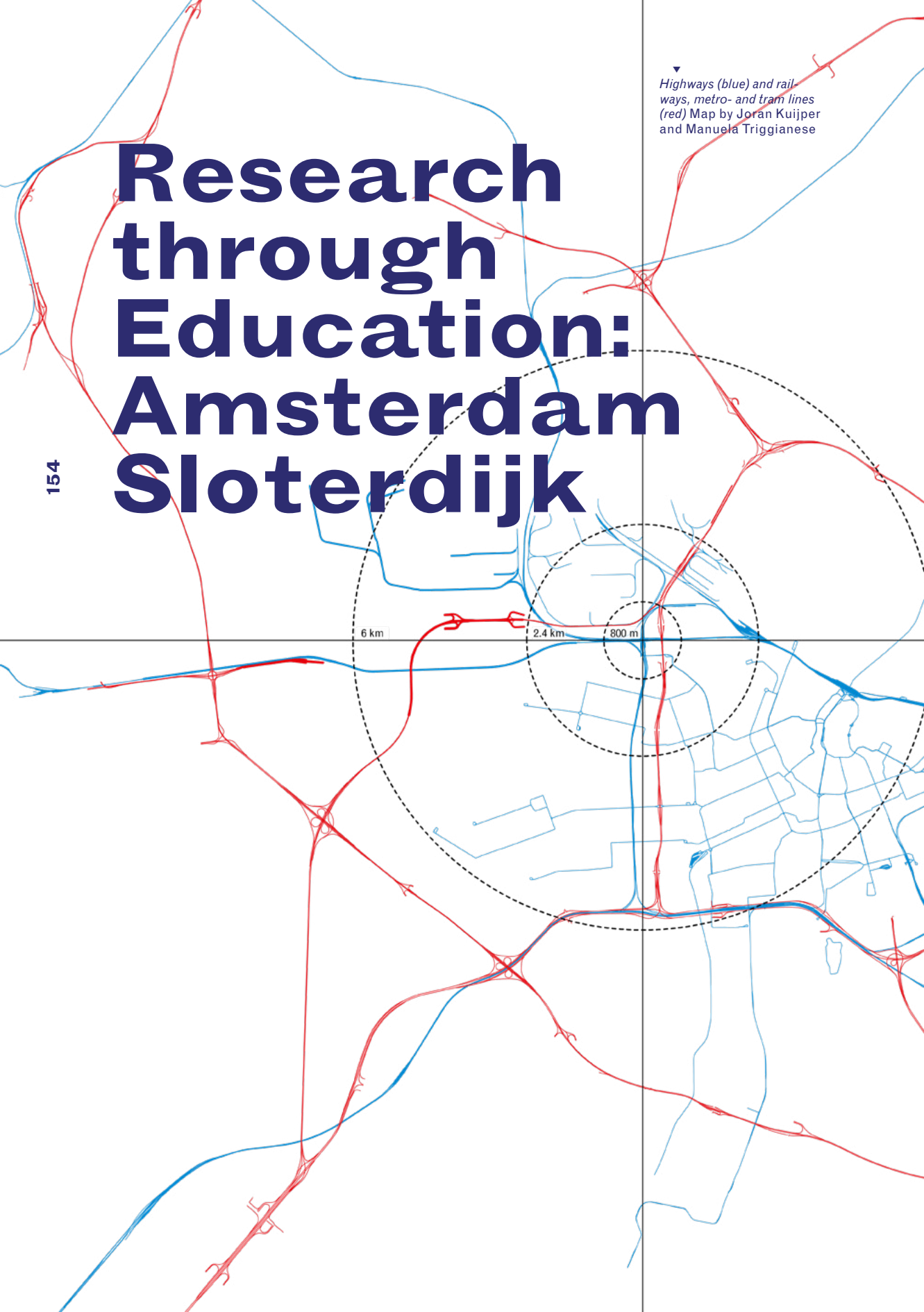
154

Research through Education: Amsterdam Sloterdijk

6 km

2.4 km

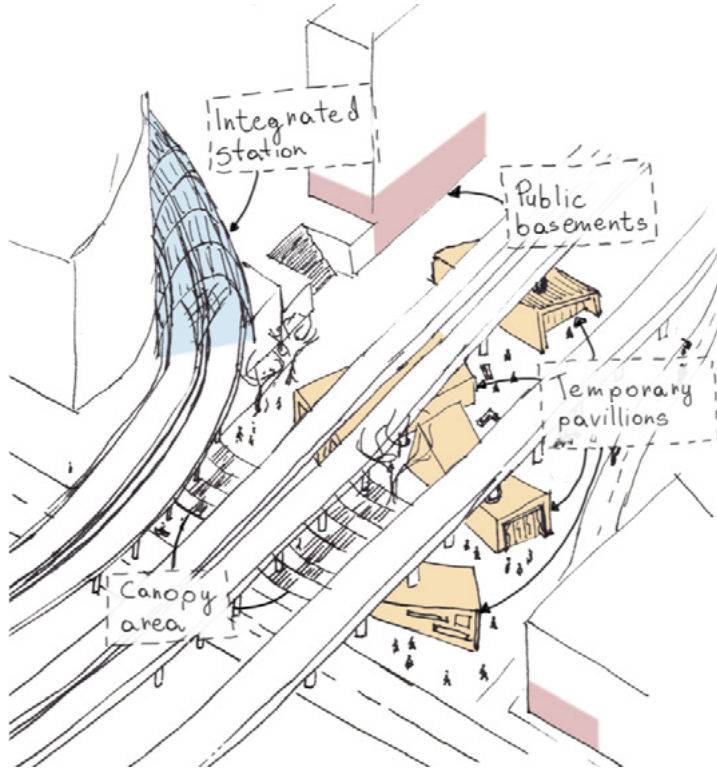
800 m





Sebastian van Damme	157	Photo reportage: Amsterdam Sloterdijk Station
Maurice Harteveld	175	Metropolitan Stations, Places for Change and Innovation
Paul Chorus	181	Amsterdam Sloterdijk: from public transport hub to metropolitan centre
Jurgen Krabbenborg & Debbie Dekkers	185	Introduction to the Summer School
Manuela Triggianese & Joran Kuijper	187	Summer School Integrated mobility challenges in future metropolitan areas: 4 teams x 4 scenarios
Valentina Ciccotosto & Hans de Boer	191	Group A—Haven-Stad Station: from machine to human landscape
Manuela Triggianese & Tom Kuipers	195	Group B—Gateway Sloterdijk 2050
Fabrizia Berlingieri & Roberto Cavallo	199	Group C—Designing Transition: A continuous variety allowing chance
Wouter Oostendorp & Joran Kuijper	205	Group D—The new Green Belt
Valentina Ciccotosto & Tessa Wijtman-Berkman	212	Summer School shots

▼
Scenario made by Group C
imagery by Francesco
Camilli, Elisa Cantone,
Rein de vliet, Jialei Feng,
Janet Hetman, Matthijs
Kosicki, Nhu Luong, Qin Li
and Karen Valitov



Group C

Designing Transition: A continuous variety allowing chance

Fabrizia Berlingieri
Roberto Cavallo

group: Francesco Camilli, Elisa Cantone, Rein de vliet,
Jialei Feng, Janet Hetman, Matthijs Kosicki, Nhu Luong,
Qin Li and Karen Valitov

A paradigmatic shift: from an incremental transfer system to a relational hub

Since its completion in 1985, the current Sloterdijk station embodies the role of the railway terminal in the 20th century society: a transfer machine. Built as one of the nodes of the infrastructural ring of urban expansion around the historical city,¹ the station was envisioned as the cross point of the most used means of transport: motorways and railways. The following development of Sloterdijk station consisted of an incremental process of infrastructural additions, connected one another simply by discrete logistic opportunities. The doubling of the flyover, in 1997, modified the structure of the station due to the accommodation of the new metro line; in 2003 the direct connection between Zaandam and Schipol Airport, with the so-called Hemboog,² inserted a disconnected duplication of the hub; later on the tram stop and the bus station moved from the front of the station (the current Orlyplein) to the Carrascoplein on the lower level. The growing demand for public transport, proportional to the impetuous growth of the city, has gradually occupied more space – inside and outside the main hub – according to the infrastructural needs, transforming Sloterdijk into a complex urban system of routes at different levels and of connections between parts.

Contemporary tendencies: the role of Sloterdijk

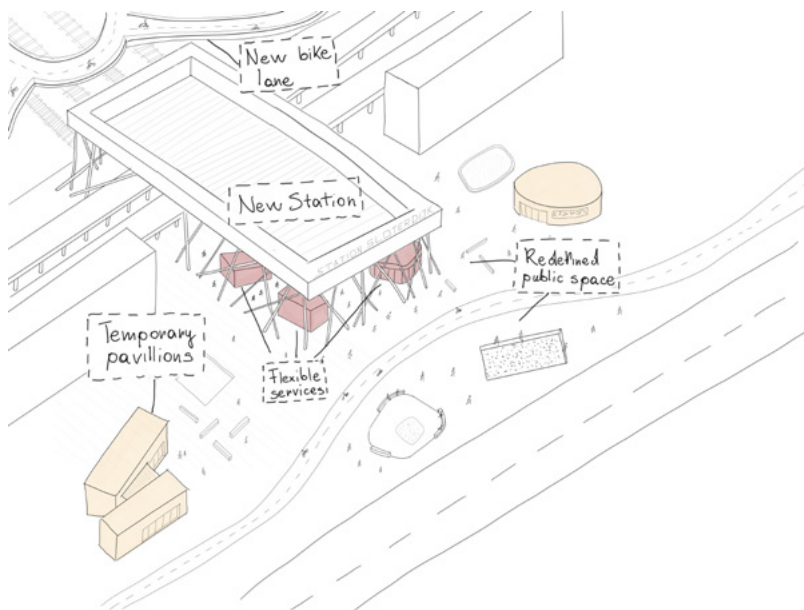
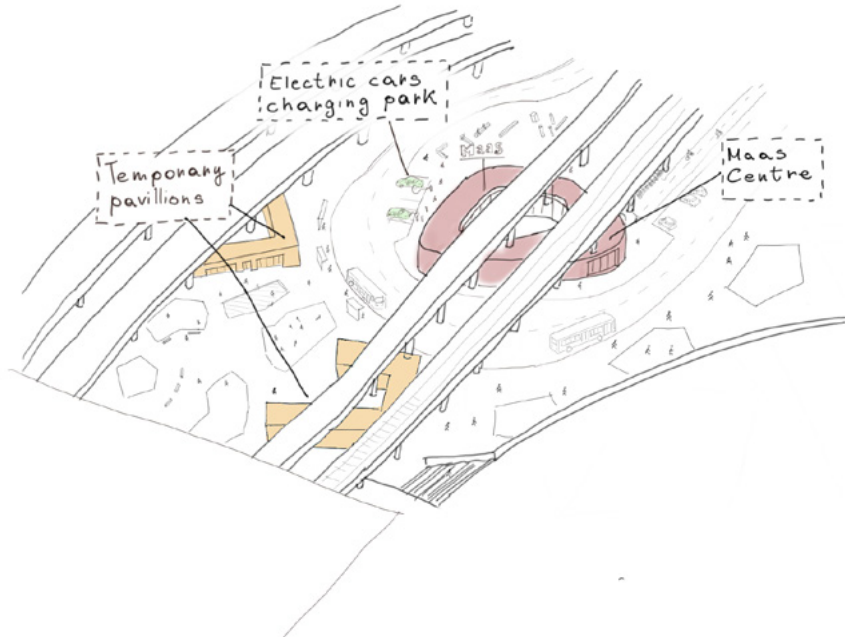
In the last decades, the development of new models of transport hubs constituted a very active research field, in which the

Dutch results represent a point of reference. The national strategy about the renewal of the main railway stations concerned indeed not only with the substitution of the previous nodes with increasingly complex typologies, but generally with a deep requalification and urban development of the related districts³. But the case of Sloterdijk seems to be an exception. Despite the municipal ambitions to attract new inhabitants to the area within few years and with several development plans,⁴ the station itself sticks to its current configuration: a complicated tangle of disconnected outputs. However, Sloterdijk railway station has already changed its role within the public transport network in the metropolitan area of Amsterdam. It represents the city gateway from the west side, connecting the north and west lines from Alkmaar and Haarlem to the inner city and serving the crossing flows coming from the outskirts with those of the main infrastructural ring. A crossroad that also marks the change between transport modes: from private to public.

The common, the district and the negotiation: station as destination

The increasing centrality of Sloterdijk in relation to the metropolitan scale has led to new interests, emerging from private and public investments, for the development of the area through densification. Yet, even if the urban profile of the district will rapidly change, its core-engine claims for new strategies. As mentioned before, European and Dutch experiences in Transport Oriented Design concentrates urban development around transport nodes, seeking a coordinated and coherent

▼
Scenario made by Group C
imagery by Francesco
Camilli, Elisa Cantone,
Rein de vliet, Jialei Feng,
Janet Hetman, Matthijs
Kosicki, Nhu Luong, Qin Li
and Karen Valitov



upgrade between the hub and the adjacent urban district.

The actors of these complex transformations can be identified in three main figures: the common, i.e. the new role of the station as a social fulcrum, the “public” strategy and vision of transformation; the district that replaces the building typology of the station, thus bringing forward a leap in scale and complexity for urban design strategies; the negotiation, i.e. management and policies also creating very often innovative practices in the domain of spatial planning, expressed through productive and never predictable results with positive outcomes for the community.

Designing transition: new technologies, new mobilities

The case of Sloterdijk station could be considered as a paradigmatic example of the adaptive growth of infrastructural nodes in respect to the raising of new mobility patterns and new technologies in transportation, mostly in the last decades. Starting from the proposed critical reading of the hub evolution, the main assumption for the design scenario is to turn this process of continuous additions into the driving force for the reconfiguration and upgrade of Sloterdijk station. The design scenario grounds, indeed, on the choice of considering the incremental evolution of the station as a possible answer to strategically hosting the future changes in technologies and mobility patterns. The proposal addresses the future scenario by designing transition, complying and supporting the incremental evolution of the existing hub and, at the same time, stressing in the design scenario this peculiar character. The existing configuration becomes the starting point for a next step of stratification able to allow changes, going beyond the concept of station as a circumscribed building but, on the contrary, framing it as a proper spread urban system, as a

soft infrastructural layer embedded within the district. The station as a spread system constitutes a jump from the architectural scale to the urban design one, at the same time weakening the iconic dimension of the architectural scale of the building complex in favour of the capacity to innovate characterizing the entire area of Sloterdijk. An open decentralized infrastructural system can generate new research themes for the future of intermediate metropolitan transport hubs, overtaking the obsolescent image of the caesura between the infrastructures and the city, and appearing as strong feature for the edging neighbourhoods, leaving openness for transition in transport modes⁵.

The project scenario constitutes a new framework that can accommodate the technological changes in progress now and in the coming future. This basic choice is translated in the proposal by means of two complementary actions: the design of the open public space to expand the influence of the station at an urban scale; the identification of new poles to host temporary activities in the domain of transport innovation.

The ground level manifesto: the station invades the city

As mentioned here above, the main element that characterizes the design proposal is the reconfiguration of the open public space that unifies and connect physically the fragmented urban areas around the station. The proposal looks at the double level of its articulation: the one of the railway accessibility (circa 5.00m above the ground) and the one of the city (ground level). The latter level, under the flyovers of the railway lines, is actually the field of new activities supporting both the hub and the livability of the district. An area freed from the circulation of cars and reserved essentially for pedestrians, public transport by tram and bus station. The homogeneous open space is intended to support

leisure and sports activities, as well as to provide new waiting areas. A space whose characterization consists of a material uniformity punctuated by small elements or pavilions as temporary grafts. The activation of the ground level is structured not only because of common activities and pavilions, but above all by the introduction of a new soft mobility network that connects the two levels of public accessibility (railways and the city). Yet, as concluded during the preliminary analysis, there is a strong lack of north-south accessibility in the area, particularly due to the presence of the railway tracks creating a barrier for pedestrian and bicycles. Because of that, a new “spine” for soft mobility is envisioned along the north-south direction. The spine runs on the two levels of the public space and at the same time intercepts different “common spaces” that are organized in the proximity of the station and within the high rise building area that will be developed around Sloterdijk in the near future. Together with the ambiguous porosity that the spine proposes, three nodes for new mobilities are distributed in the reconfigured station area – north, center and south –, helping to finalize the “spread station system” throughout the Sloterdijk district.

Variety allowing change: phasing the scenario

The station that invades the city as a discrete system, made up of nodes connected with each others by a soft mobility network and a porous public space, is the main idea of the proposal. The construction of this new scenario can be implemented as a “spider-net”, according to two main principles of contemporary design practices related to infrastructures that characterize

the proposal: porosity and ambiguity. The first concept is addressed by means of the soft mobility network and the different common spaces envisioned both in the public domain and in the private developments, bringing forward also a functional mix that allows permeability and social inclusion in the future district. The second concept of ambiguity is addressed by supporting transition in the design scenario, namely proposing a temporary occupancy versus a fixed plan evolution. Indeed, an ambiguous position has, in this case, the main goal to enhance and enforce the idea of proximity between the station and the district as well as to support technology and mobility changes already happening in relation to infrastructural urban design. Consciously, the proposal turns down the iconic architectural imagery, nowadays too often self-referential, replacing it with a continuous variety allowing change.

Notes

1

C. van Eesteren and Th. K. van Lohuizen. Algemeen Uitbreidingsplan Amsterdam, 1934. Collectie NAI,

2

The name Hemboog refers to Hemhavens, the harbor area at the other side of the IJ water, marking the beginning of the municipality of Zaandam.

3

Transit Oriented Development Strategy, see also Tan, W., Koster, H. R. A., & Hoogerbrugge, M. (2013). *Knooppuntontwikkeling in Nederland: (Hoe) moeten we TOD implementeren?* 's-Gravenhage: Platform 31.

4

Ruimte voor de Stad (Space for the City). Development Strategy for Amsterdam 2025. See Plan Amsterdam 01-2018 available online: <https://issuu.com/gemeenteamsterdam/docs/planam-01-2018>

5

For more information look at *Transport Systems Catapult Exploring the Opportunity for Mobility as a Service in the UK*: www.ts.catapult.org.uk

AMS/TU Delft Summer School 2018

fU Delft

CARIS OF THE FUTURE POLICY LEADERS

In the ambitious plan for the quarter of Havenstad, delivered from the city of Amsterdam to give an answer to the increasing demand of growth, a former industrial zone is being transformed into a high quality mixed residential area. The urbanization calls for extra investments in the public sphere. Sloterdijk station may function as a center of this development area.

In the past, this station was developed mainly to work as an efficient transfer hub but this, through the years, has however lead to a station that is not very attractive nor efficient. In line with the ambition of the municipality the aim for Sloterdijk is to create a high quality public place where people want to go, stay and live.

This does not only imply good accessibility, but also livability and sustainability. In this last week, we have aimed to answer the question of how Sloterdijk station can play a role in its urban context and in its surroundings so that it becomes an attractive destination.

Furthermore, we looked at which approaches can be tested and applied to intermodal nodes when dealing with lack of space and a growing number of directioned users.

On the basis of a mobility and area analysis, a strategy was developed based on three pillars: variety, continuity and allowing for evolution. This led to an integrated design for Sloterdijk station to improve the mobility and the quality of the new public space. It aims to serve as a catalyst for urban development for the entire area, making Havenstad an attractive mixed-use area, where residential, commercial, leisure and mobility initiatives thrive.

SLOTERDIJK

a continuous variety for allowing change

AMSTERDAM NIEUW WEST

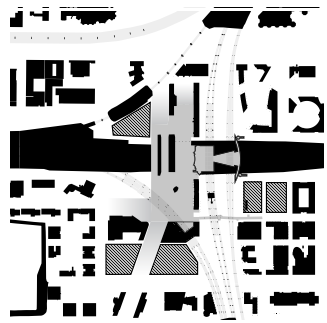
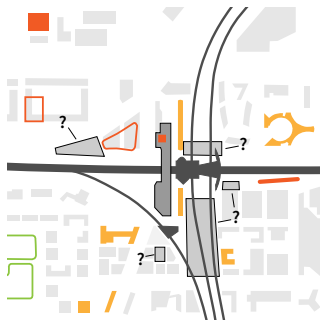
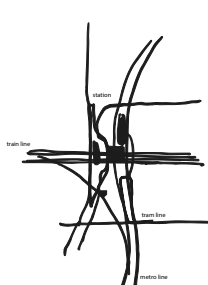
STUDENTS

Francesco CAMILLI, Elisa CANTONE, Rian DE VIET, Jialei FENG, Janet HETMAN, Maithys KOSCIK, Nhu LUONG, Li QIN, Karen VALTOV

SUPERVISORS

Fabrizia BEFLINGIERI, Roberto CAVALLIO

ANALYSIS

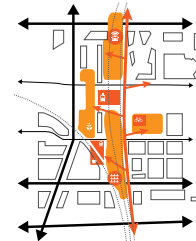
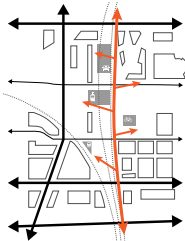
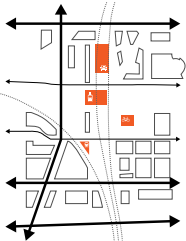


MOBILITY ANALYSIS
infrastructural layering

AREA ANALYSIS
scattered public functions

SPATIAL ANALYSIS
continuity vs. barriers

STRATEGY

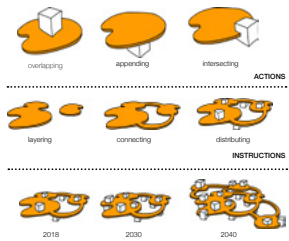


01_analysis of the existing situation

02_analysis of the existing connections

03_improved connectivity

IMPROVING CONNECTIVITY STRATEGY



STRATEGICAL VOCABULARY





**Research project leadership
and publication sponsors**

TU Delft | Deltas, Infrastructures & Mobility Initiative

AMS
AMSTERDAM INSTITUTE FOR
ADVANCED METROPOLITAN SOLUTIONS

TU Delft Delft University of Technology
Faculty of Architecture
and the Built Environment
BK Bouwkunde

CP Department of Architecture
Chair of Complex Projects

ISBN 978-94-6366-140-9



9 789463 661409 >

**Delft University of Technology,
Faculty of Architecture and the Built Environment**

Delft Deltas, Infrastructures & Mobility Initiative

Amsterdam Institute for Advanced Metropolitan Solutions

Université Paris-Est, École d'Urbanisme de Paris