

CIRCULAR GANGBUK

MAKERCITY SEWOON



ATELIER HUANG SPRING 2022

The projects and architectural interventions of this studio will focus on Sewoon Makercity, a strangely suspended, brutalist megastructure in Gangbuk, Seoul. We will examine the potential of Sewoon as a catalyst for Gangbuk's transition to a future, net-zero circular economy.

Historically, Sewoon has been going through several stages of development. On a narrow strip, cleared by the Imperial Japanese rulers towards the end of World War 2, in order to prevent the spread of fire in the event of US firebombing, Sewoon was originally designed as a mixed-use commercial and residential complex by the notorious Korean architect Kim Swoo-Geun in the late 1960s. Over time, a bottom-up culture has emerged, with local artisans and entrepreneurs appropriating the megastructure, and alternative markets blossoming, from electronic boutiques, to gaming parlors, porn and pirated media. The uniqueness of Sewoon has been in how it merges manufacturing, distribution, working and living, the young and the old, the official and the illicit. Famously, it was rumored that Sewoon had "everything to build a tank or a nuclear powered submarine".

Yet the character of Gangbuk is rapidly changing and the injection of new capital is transforming the city. Rather than succumbing to the temptation of a glitzy gentrification, however, Sewoon has resisted and preserved its unique personality, at least, so far.

In this experimental studio, we consider Sewoon as our living laboratory, as an architectural vehicle, to examine how a brutalist architectural relict of the 1960s, can be revitalized and act as a catalyst for transitioning a district (Gangbuk) into an exemplary circular economy.

The circular economy promises to change the way society produces goods, how they are procured and delivered, how waste is collected and re-entered into the value chain. This new economy will inevitably be accompanied by high and low-tech automation, artificial intelligence and smart infrastructure, including electronic delivery systems and drones. Paradoxically, the new technologies, which threaten to replace the human counterparts, desire proximity to their human customers, to rapidly deliver more highly customized commodities (the last mile problem).

This desire for proximity is leading to the development of circular mass-customization and on-demand manufacturing which is cleaner and less impactful environmentally. Can the integration of these technologies in the city provide an impetus for their humanization?

The envisaged automation of circular manufacturing in Sewoon, resulting in a sort of cyborgization of architecture, begs several questions: How will we co-exist with machines? How will we relate to destinations with unpopulated architecture in the city? In the absence of universal access to technology, how will we promote diversity in thinking, living and working without succumbing to the creation of smart enclaves?

The work of the studio will be situated between a larger scale, systems view of the flows of material and goods in the neighborhood (Gangbuk), and a precise and detailed architectural intervention into an existing building (Sewoon). Accordingly, there will be two key drawings in the studio that will form the culmination of studio deliverables and that will be developed iteratively (with particular attention

given to the representational aesthetics of the digital drawing - line width, colors, composition, etc.): (1) an axonometry showing the flows (from waste to product) and circular relationship with the urban tissue, and (2) a 3D cross-section showing the transformation/vertical extension of the existing megastructure (Sewoon) into a circular (automated/populated) manufacturing and distribution infrastructure.

Students will focus on a particular material flow of their choice. From plastics, garments, plants, food, electronics, the purpose is for the combination of the different flows, from waste to product, to form the basis for the spatial and socio-ecological transformation of Gangbuk into Circular Gangbuk.

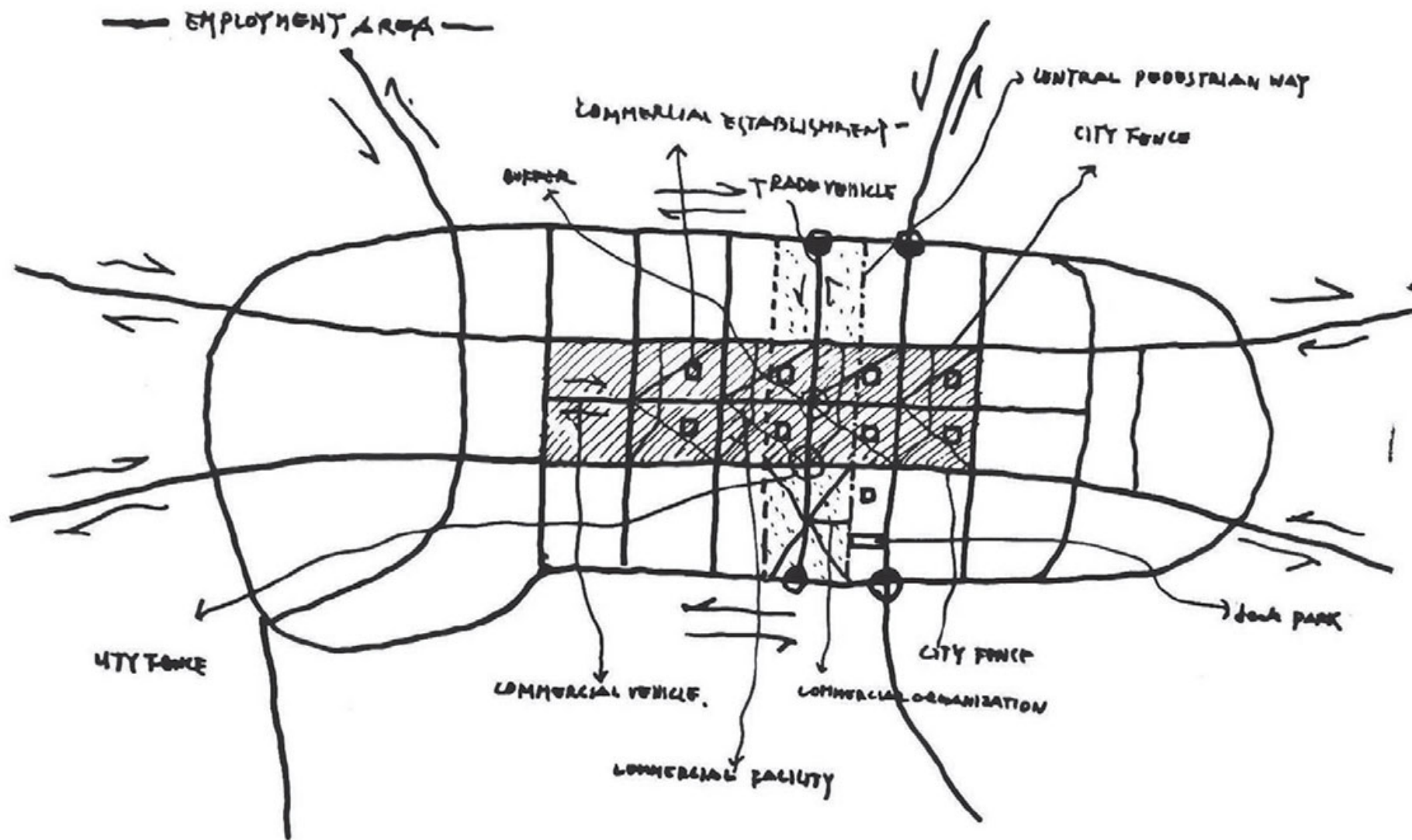
The studio will use advanced digital tools, including software, scripts and plug-ins for environmental analysis (Ladybug or equivalent), multi-agent simulation (Grasshopper, Python), personal 3D printing, and digital representation (V-Ray, Blender, Unity or equivalent). No prior programming or software is required, however, there should be curiosity and desire to learn.



Hanul Lee
City fabric of Gangbuk, Jung-gu, Seoul, 2021.



Hanul Lee
City fabric of Gangbuk, Jung-gu, Seoul, 2021.



Swoo-geun Kim

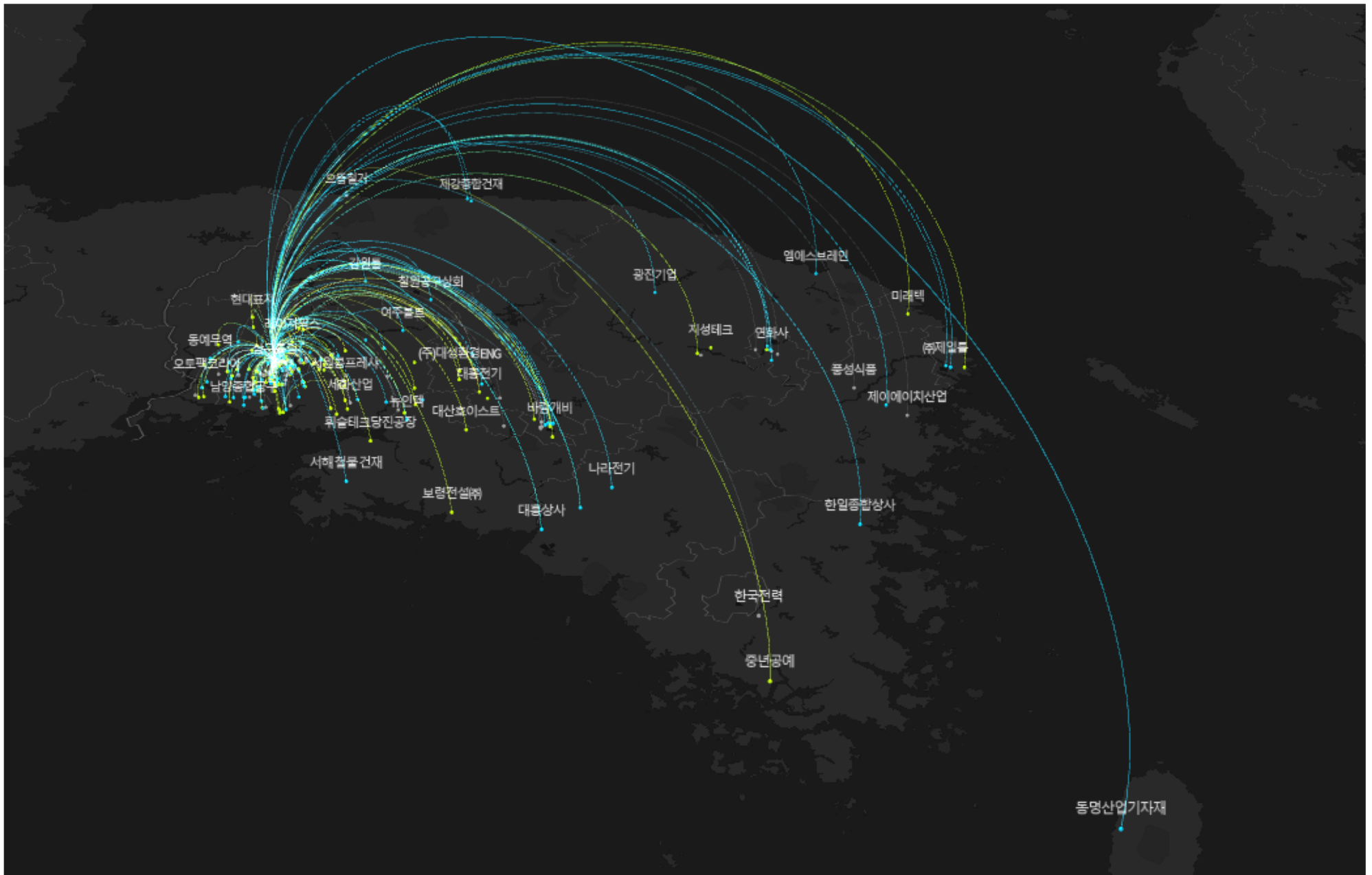
Original sketch of urban redevelopment plan centered around Sewoon Complex, *Space No.11*, 1967.



Seoul Museum of History
Sewoon complex and surrounding city fabric, Eulji-ro, Jongno-gu, 1968.



Wonyoung So
Industrial ecosystem network between fabricators and distributors in Eulji-ro, 2021



Wonyoung So
Industrial ecosystem network between fabricators and distributors at national level, 2021



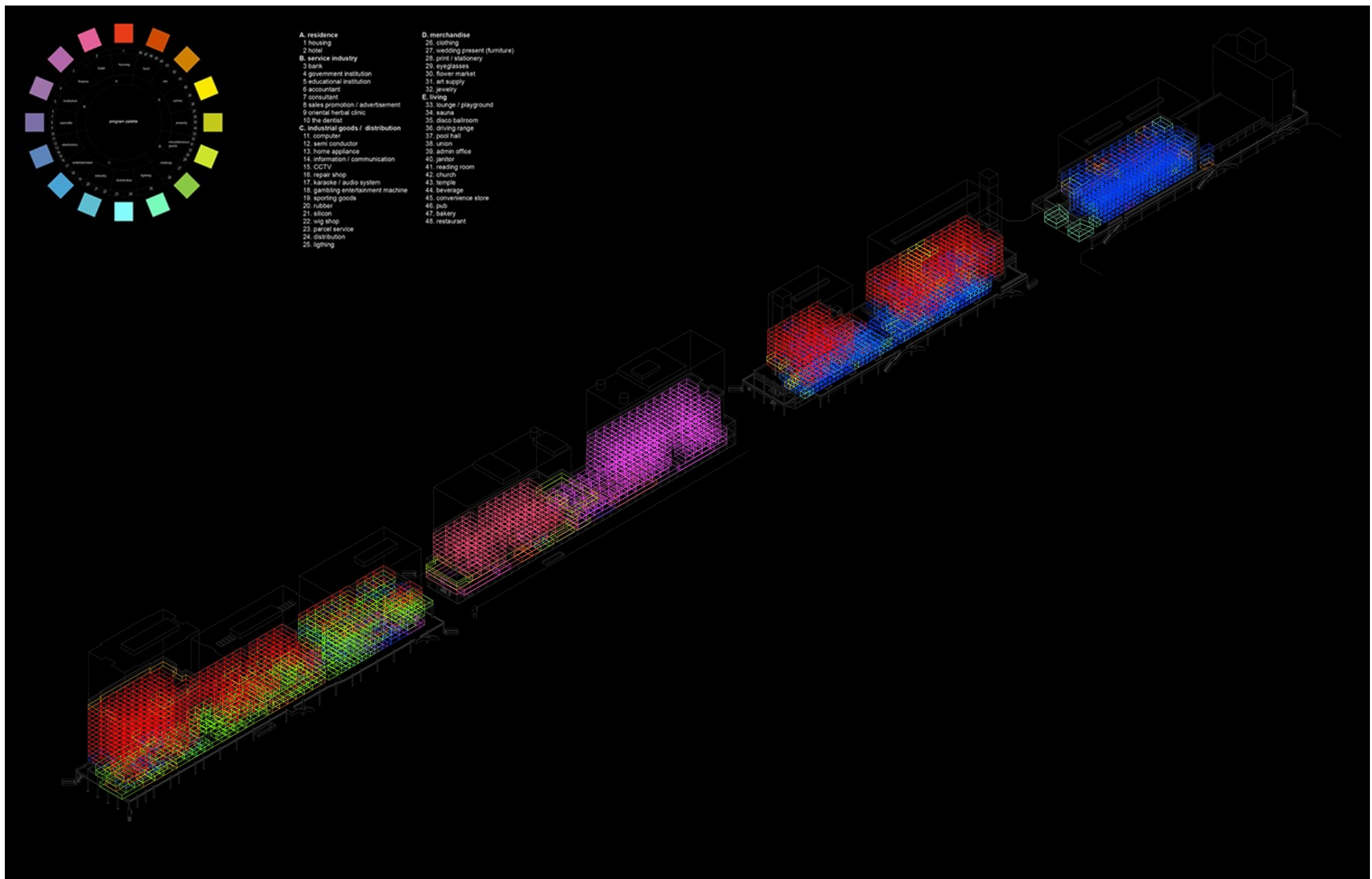
Kyung Roh
Sewoon electronic store complex at Jong-no 3 street, Eulji-ro, 2015.



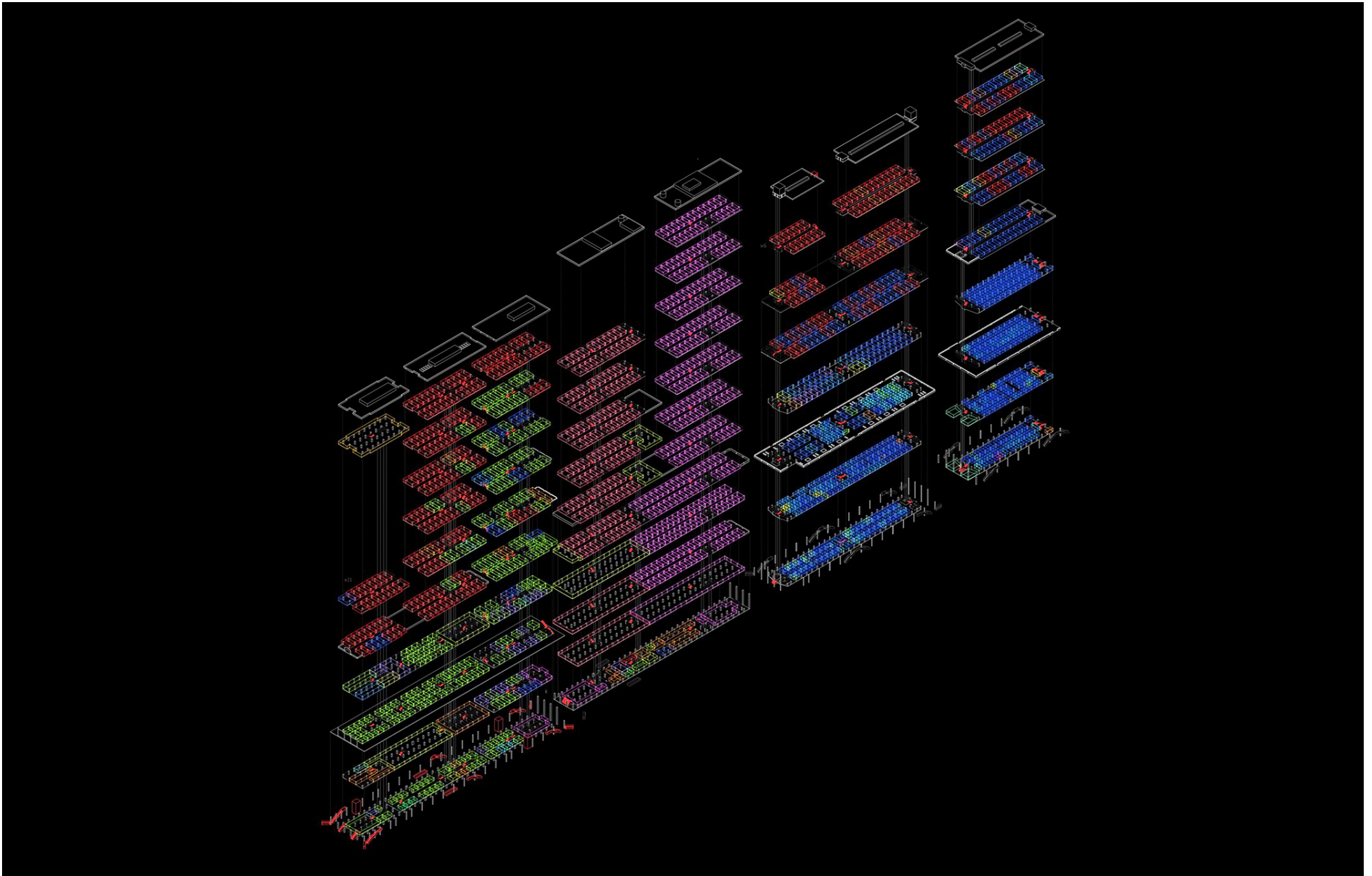
Thierry Sauvage
Sewoon complex surrounded by small buildings of shops and small manufacturers, Eulji-ro, 2018.



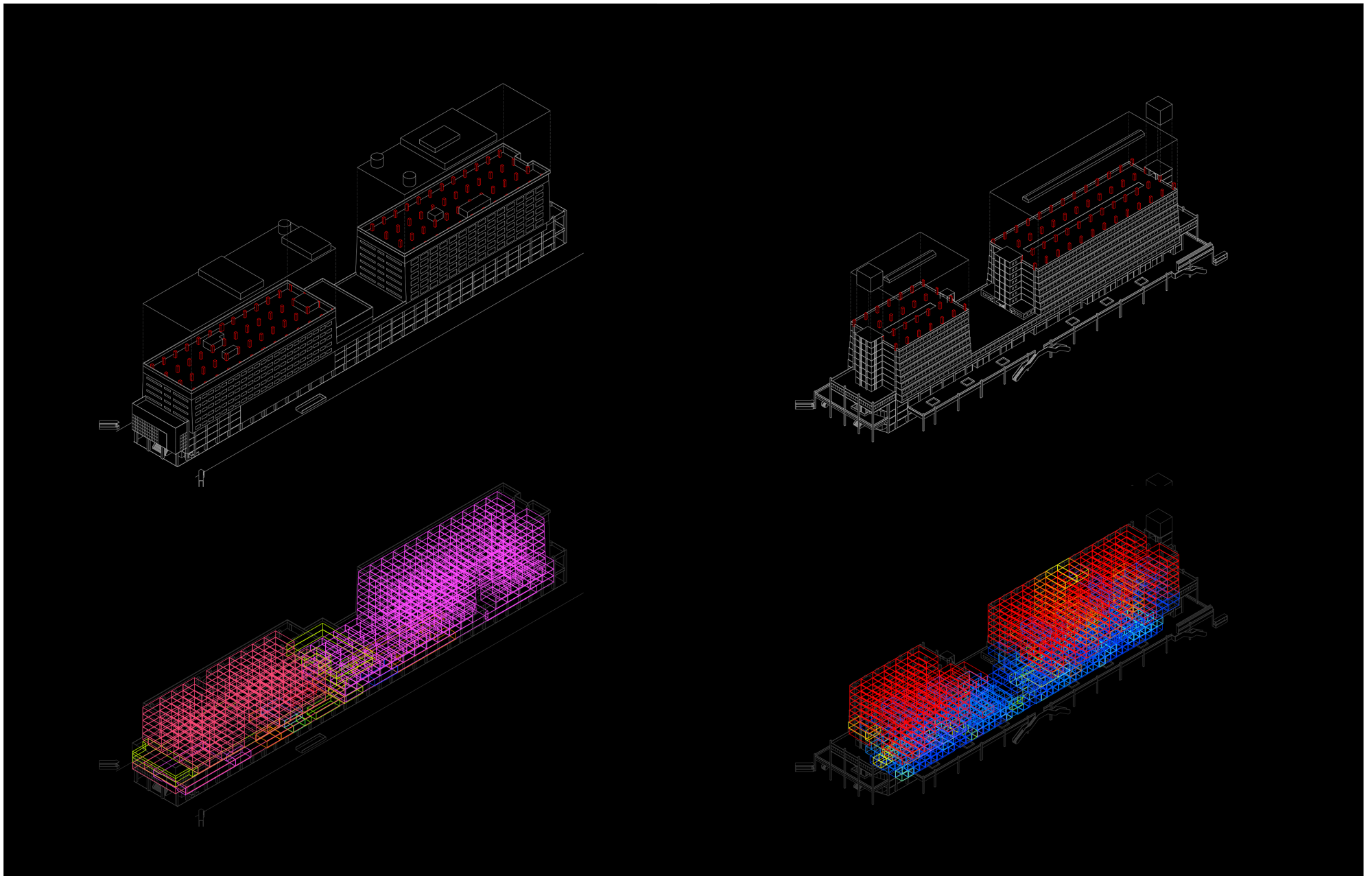
nicechild
Interior of the upper levels of the living units of Sewoon Complex, Eulji-ro, 2019.



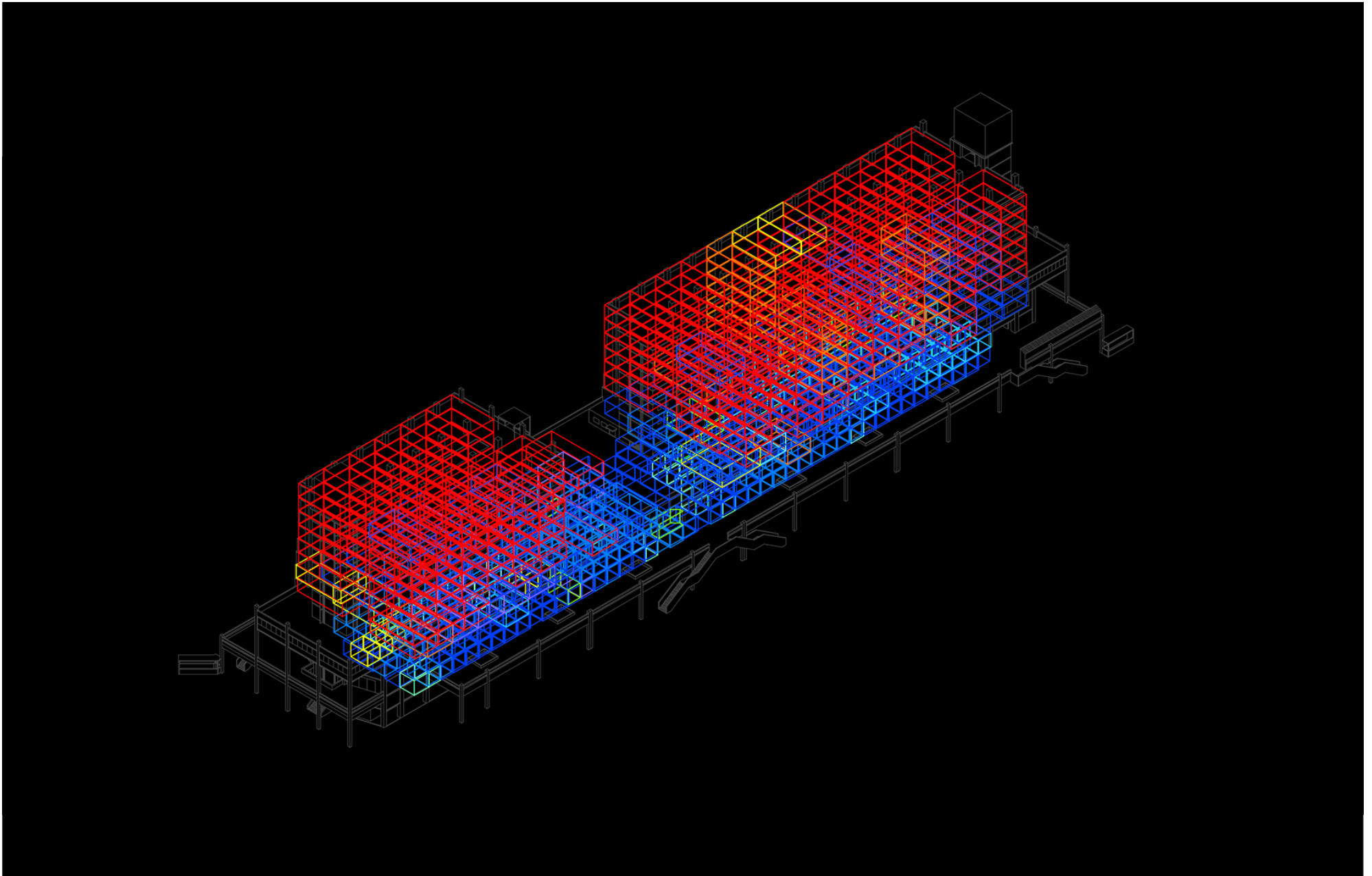
Peter Ferretto, Boreum Lee, Seungho Park
 Programmatic drawing of Sewon Complex, Eulji-ro, 2010.



Peter Ferretto, Boreum Lee, Seungho Park
Level by level programmatic diagram of the Sewoon Complex, Eulji-ro, 2010.



Peter Ferretto, Boreum Lee, Seungho Park
Axonometries of Sampoong and Daelim buildings of Seewoon Complex, Eulji-ro, 2010.



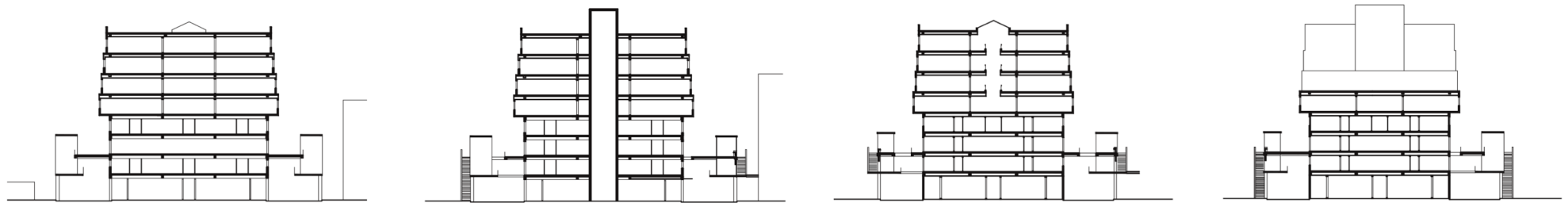
Peter Ferretto, Boreum Lee, Seungho Park
Programmatic diagram of Daelim building of Seewoon Complex, Eulji-ro, 2010.



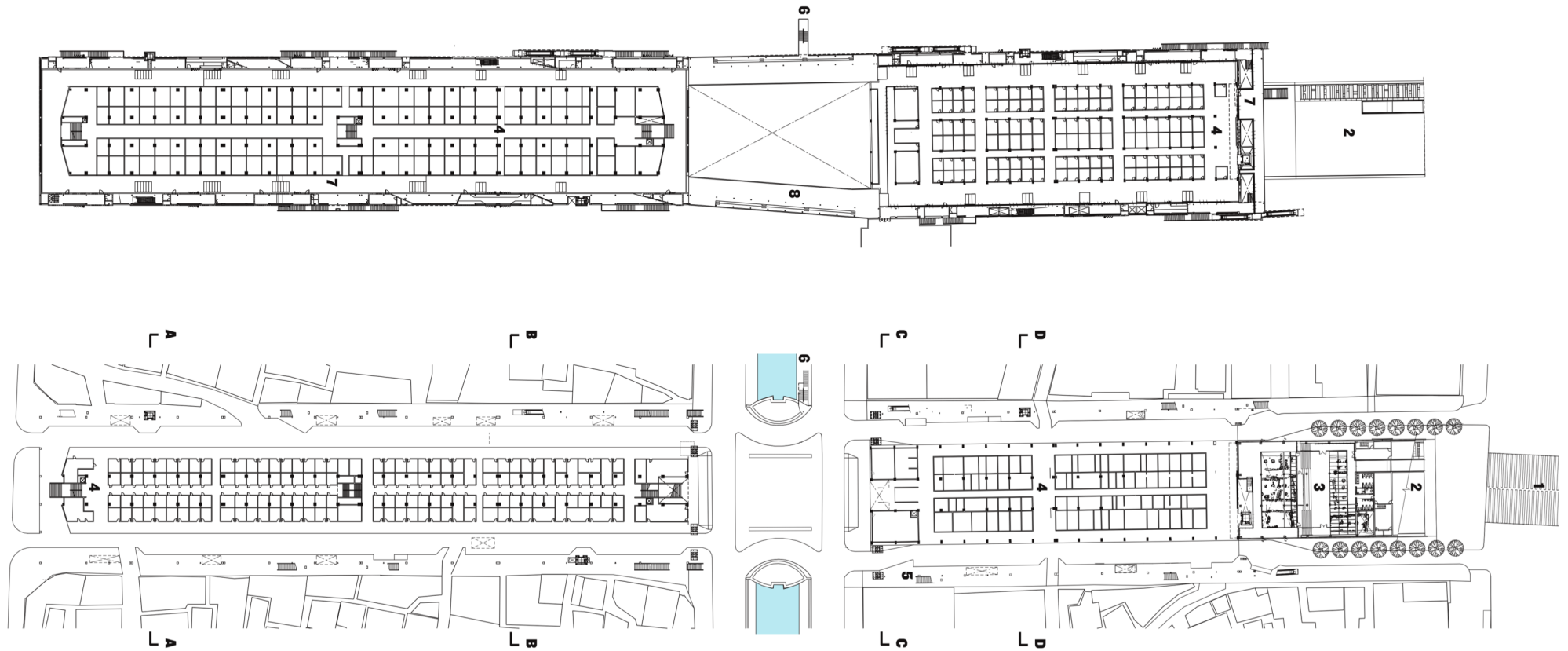
Hyuk-gyu Choi
Ironworks alley of densely populated area with fabricators near Sewoon Complex, Eulji-ro, 2020.



Bongi Koo
Back alley of small manufactures near Sewoon Complex, Eulji-ro, 2020.



E_SCape Architects
Sections through Sewoon Complex, 2018.



E_SCAPE Architects
 Spatial organization in Ground and bridge level floor plan, 2018.



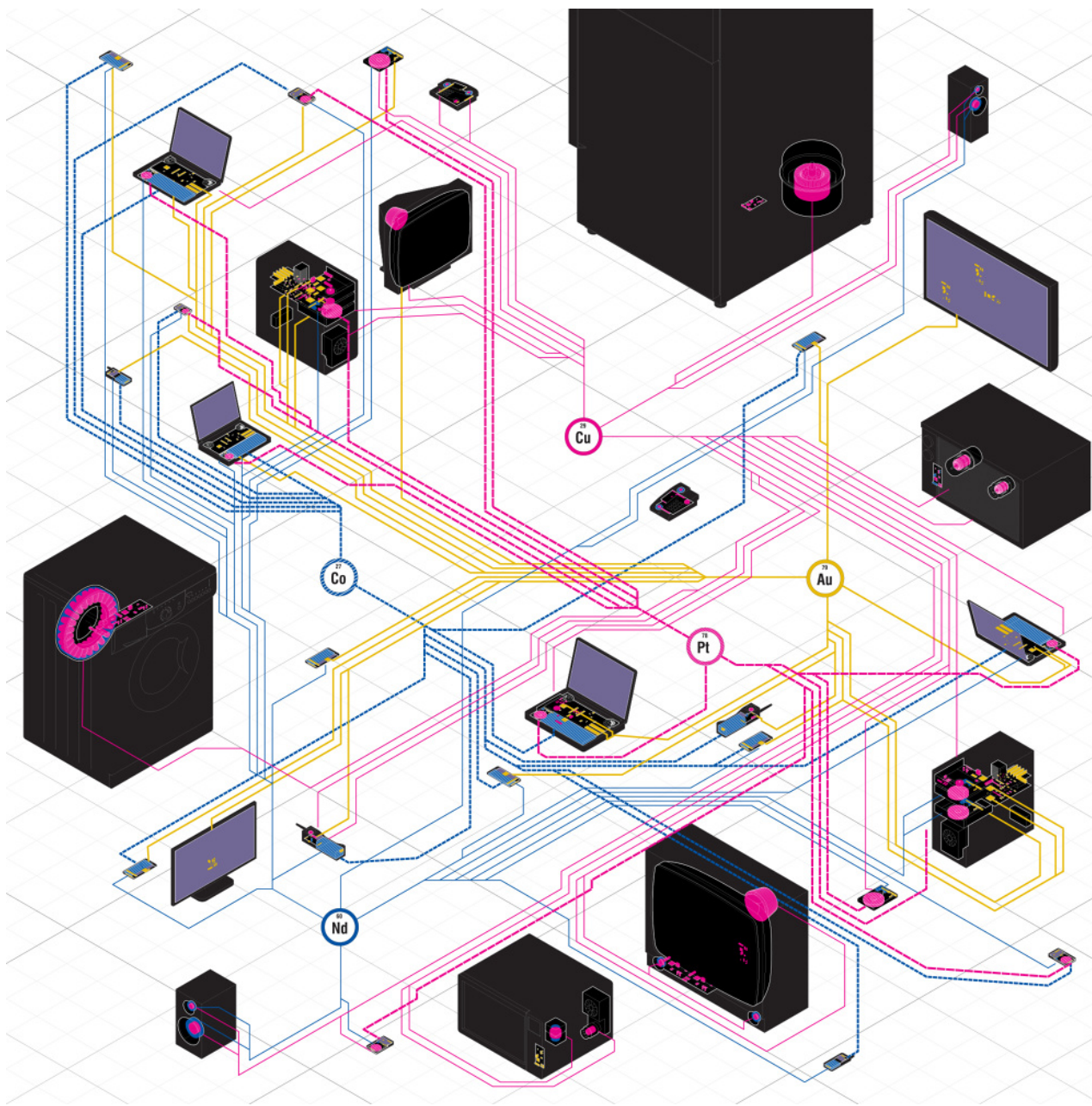
Wonyoung So
Masters of Eulji-ro, 2019.



Yoon-jung Kang
Masters of Eulji-ro, 2019.

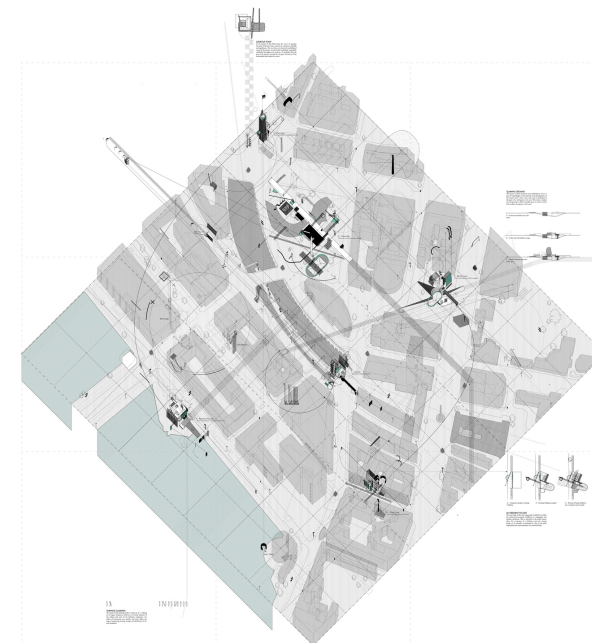
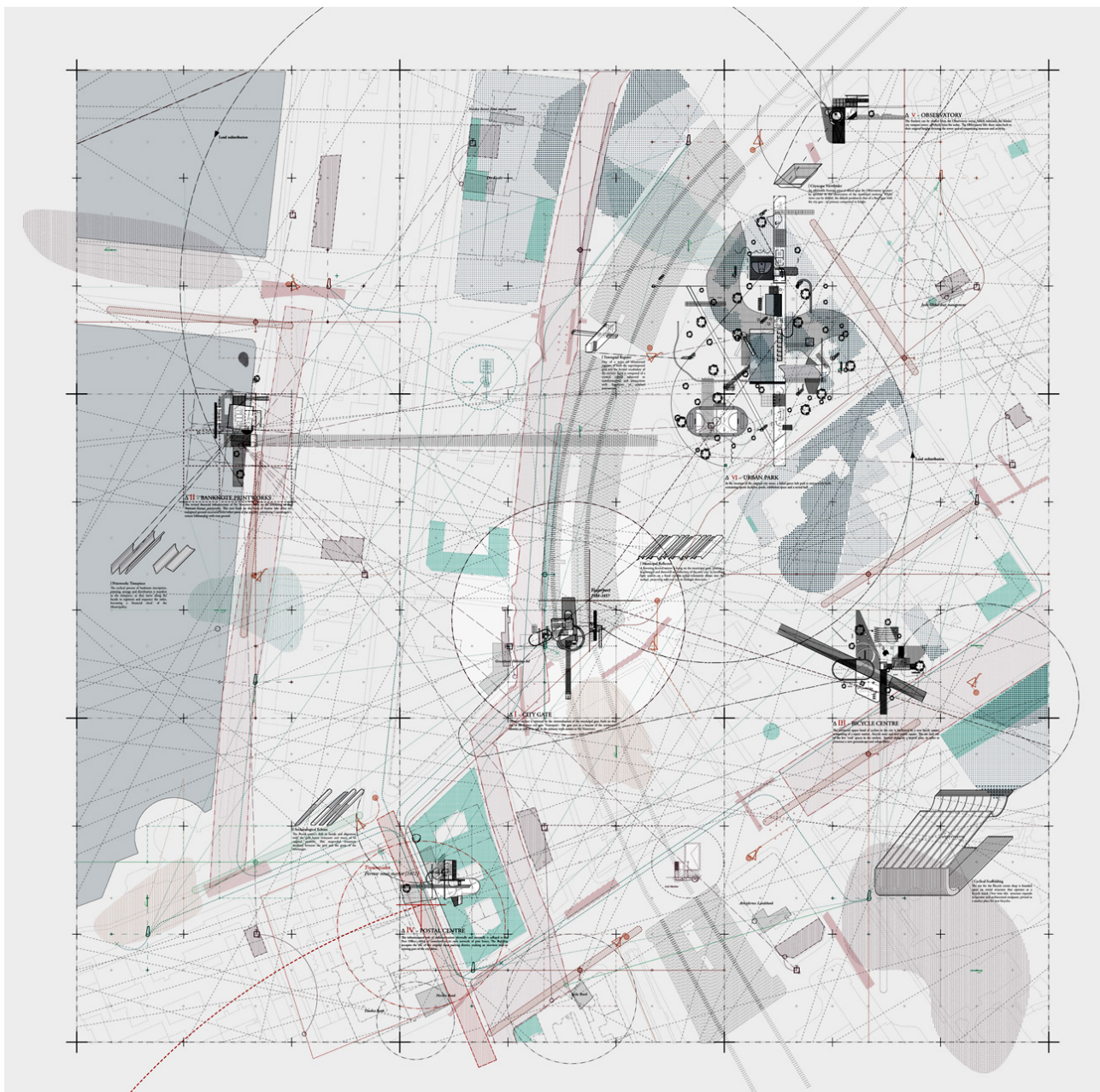


MJ Kim
Masters of Eulji-ro, 2019.

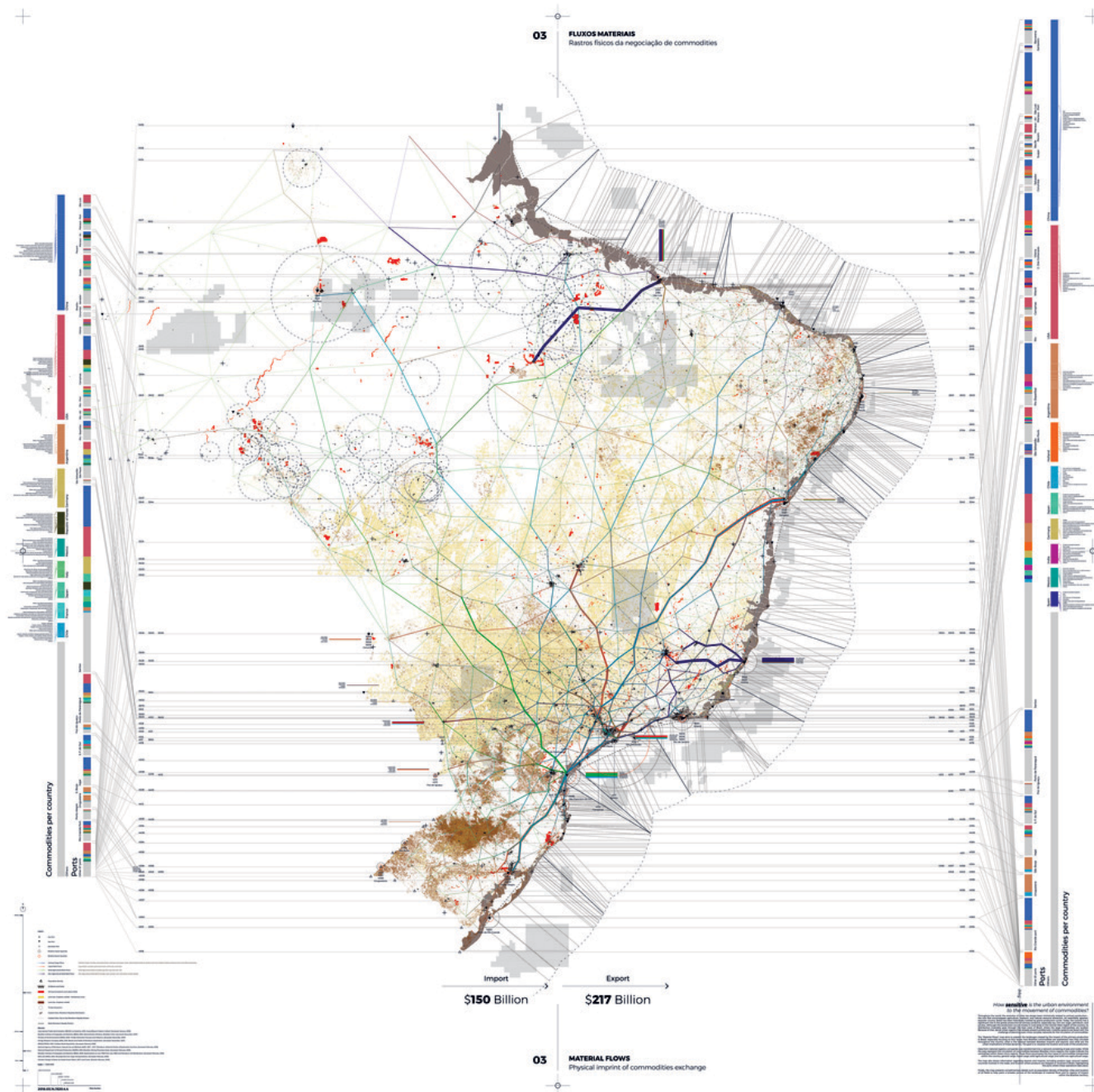


Lateral Office

From Product to Material: raw materials from e-waste, *States of Disassembly*, 2017.



Sayan Skandarajah
Curating an egalitarian territory, Copenhagen, Denmark, 2014.



Sérgio Besserman, Philip Yang, Marcela Ferreira

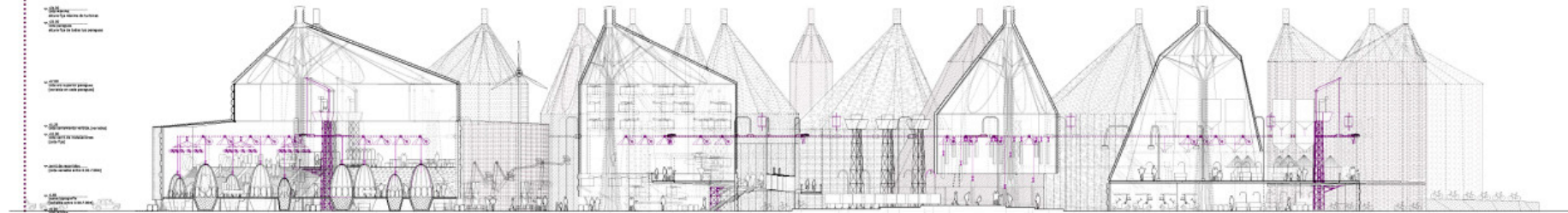
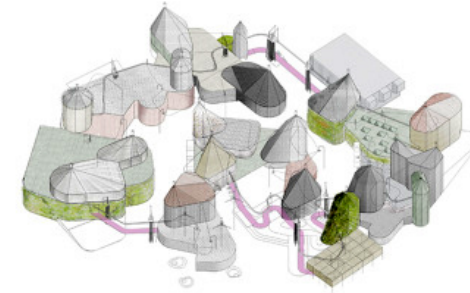
Map of Material Flows: physical imprint of commodities exchange, the Brazilian Pavilion at the Venice Biennale, 2018.

► aplicación en el puerto de Vigo

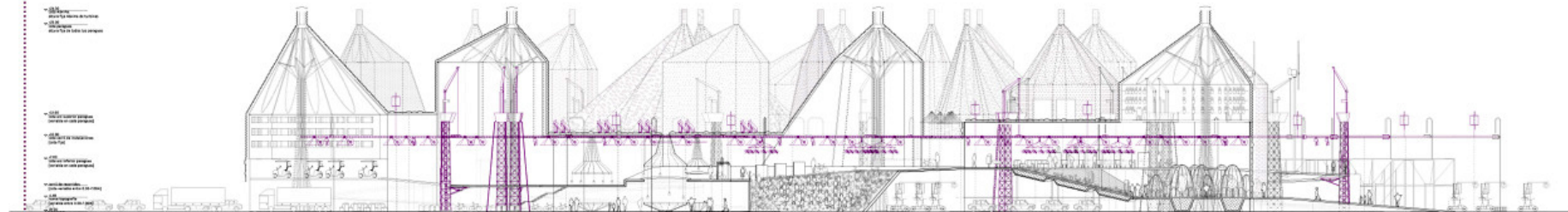
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desarrolla:
secciones
sección transversal y sección a lo largo del carril de recorridos
e. 1/250

1:1000



★ sección transversal por los parques



★ sección longitudinal paralela al carril de recorridos

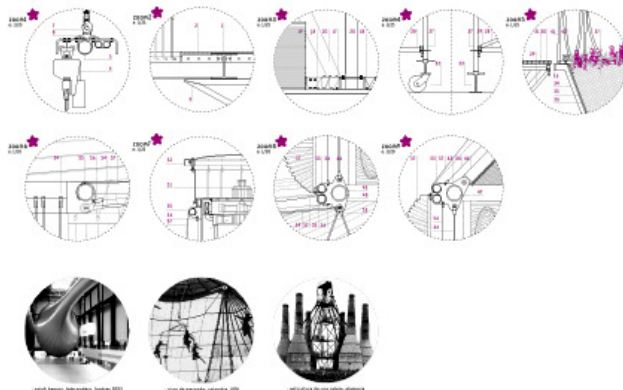


Lys Villalba Rubio

Architectural tools to re-activate decaying places, Vigo, Spain, 2008.

desarrolla: [] [] [] [] [] []
sección constructiva
escala 1/50

details, e: 1/25, g: 1/20 y e: 1/10.



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- 17 - *Elaboro un texto persuasivo sobre los usos responsables de Internet en el mundo de hoy.*
- 18 - *Analizo la aplicación empresarial de TICs en el sector generacional de las empresas latinoamericanas (datos de la OEA sobre el tema) y elaboro un informe de investigación con respecto a las ventajas y desventajas de esta tecnología.*
- 19 - *Elaboro un comentario sobre la cultura, el mundo de los videojuegos, Internet, redes sociales, etc. para un grupo de jóvenes. Defiendo una postura generacional de acuerdo a los datos, analizo el mundo del trabajo y el uso generacional de las tecnologías, hago un análisis de la cultura de la información y de las nuevas tecnologías, expongo mi opinión y defiendo una postura.*

creative commons

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escaleras fijas y móviles.

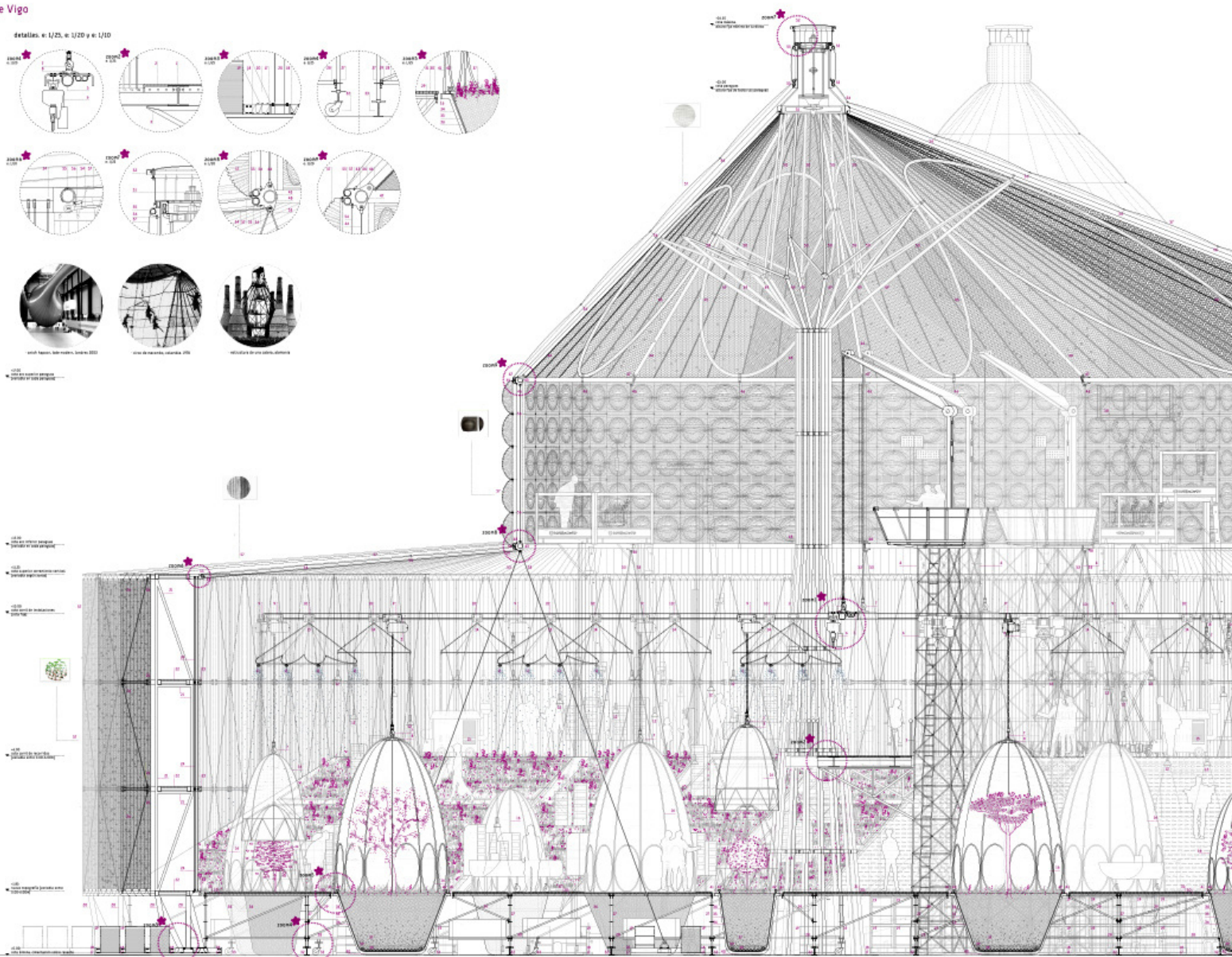
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instrucciones paraguay

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 Estudios y citas

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Important Dates

Spring, 2022

Studio Introduction

Feb 21

Phase I: Material Flows (2 weeks)

Feb 22-Mar 8

Phase II: Circular Map and Section Design (6 weeks)

Mar 14-Apr 12

Spring Break

Apr 15-Apr 24

Phase III: Design Simulation (3 weeks)

Apr 25-May 10

Phase IV: Representation (2 weeks)

May 16-24

Final Review

May 30

The Studio theme spans the entire academic year of 2021/22. Accordingly, there will be continuity between the fall and spring semester, but each semester can be followed independently. Prior programming experience is not required.

Dates are subject to change.

Team

Media x Design Laboratory

Prof. Jeffrey Huang

Marcela Delgado, Christina Doumptioti,

Christoph Holz, Mikhael Johanes,

Frederick Kim, Gianna Ledermann,

Alex Sadeghi

Partner

Hanyang University

Prof. Jae Kim

Prof. Minjung Maing

SPOA