# Black Holes and Wormholes: Speculative Scenarios of University's City Spaces

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The thesis starts from the premise that the University of Rijeka campus has been fully completed, along with ongoing major urban projects. By imagining Rijeka's near future as outlined in national, regional and local strategic documents, a conceptual framework of Rijeka 2030 is created, onto which the University expands through its own long-term strategic plans. Its slogan "Open University of the Future" is taken at face value and embraced as an ethos that the thesis seeks to wholeheartedly embody.

The work explores scenarios for reclaiming existing university buildings as imagined components of future public infrastructure, aiming both to maintain and unfold the latent relationships between the city and the University, seeking to establish urban experience as a key element in academic life. It examines emerging strategies, programs and uses through which the University could reshape its urban presence and deepen its "anchoring" within the community. To this end, the thesis reevaluates three case studies: the Faculty of Maritime Studies, the Faculty of Medicine and the IVEX building, which houses the Urban Studies program. The project therefore proposes varied approaches to reusing the University's residual building inventory.

The intended outcome is a departure from current efforts to relocate all University activity outside the city center. While acknowledging the benefits of the territorial consolidation of the campus, the thesis advocates anticipatory planning of the soon-to-be vacant spaces, focusing on the unconventional intersection of non-profit and profit-oriented programs, socio-spatial inclusion of non-traditional users and academic spaces as intergenerational commons. These interventions aim to cultivate a resilient, socially engaged and open academia as advocated by the University.

In conclusion, the thesis calls for a reconsideration of the campus model as the default urban planning paradigm for the University of Rijeka.

**Dorian Vujnović**, M.Arch., graduated in 2020 from the Faculty of Architecture at the University of Ljubljana. In 2024, he completed the interdisciplinary specialist postgraduate program Urban Studies, run by Deltalab at the University of Rijeka. He participates in competitions, exhibitions, and workshops, and occasionally writes.

# Atlas of Concepts / Atlas of Projects



**4. Preserving Rijeka 2030**

A smart, green and clean city adapted to the needs of all citizens.

4.1. A city of smart and high-quality utility services (H)
4.2. A green city by the sea: space serving the citizens
4.3. A city of circular resource management, connected with the entire region

**3. Connecting Rijeka 2030**

A multimodal transport hub with a sustainable and efficient transport system.

3.1. Rijeka connected to the world and its surroundings
3.2. Clean, efficient, and accessible public transportation (H)
3.3. Development of the urban transport system and mobility (H)
3.4. Development of ICT infrastructure in the city (H)

**1. Living in Rijeka 2030**

A city of diversity, where a high quality of life results from the collaboration of a smart city administration and engaged residents.

1.1. Education serving quality of life and economic growth
1.2. A healthy, active & socially sensitive city attractive for living
1.3. Capital of culture even after 2020
1.4. Cooperation between smart administration and engaged residents (H)

**Rijeka 2030**
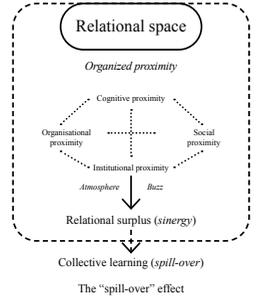a smart, open and resilient city

**2. Working in Rijeka 2030**

A university city for a new era, where advanced technologies and the creative industry enrich the industrial heritage and strengthen the economy.

2.1. A competitive economy and port in the age of new industries (H)
2.2. Innovative Rijeka: encouraging research and knowledge-based industries (H)
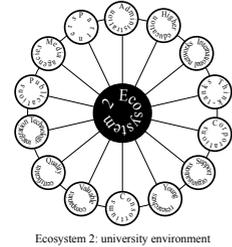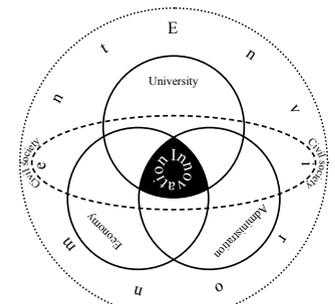2.3. A city of sustainable and innovative solutions in tourism (H)

**3. Smart Rijeka 2030**

A regional hub for Southeast Europe for the development and implementation of smart solutions in city governance and urban infrastructure.
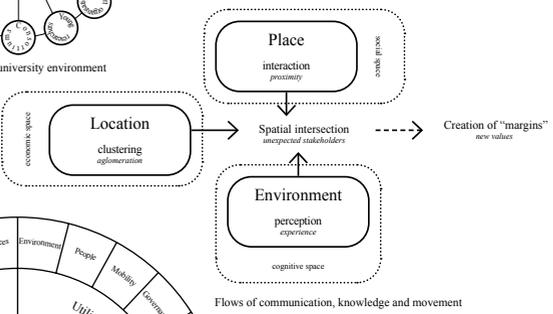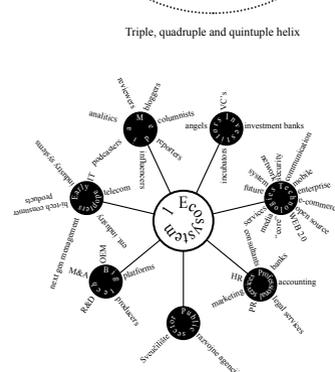
*Horizontal goal*

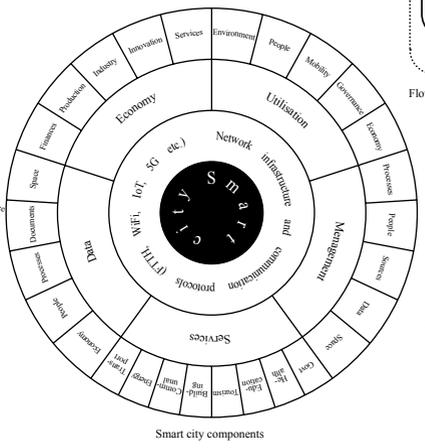Rijeka City Development Plan 2021 - 2027

**Relational space**

*Organized proximity*

Cognitive proximity
Organisational proximity — Social proximity
Institutional proximity

*Atmosphere   Buzz*

Relational surplus (*sinergy*)

Collective learning (spill-over)

The "spill-over" effect

Triple, quadruple and quintuple helix

Ecosystem 2: university environment

Ecosystem 2: innovation environment

**Place**
interaction
*proximity*

**Location**
clustering
*agglomeration*

Spatial intersection
*unexpected stakeholders*

Creation of "margins"
*new values*

**Environment**
perception
*experience*

*cognitive space*

Flows of communication, knowledge and movement

Smart city components

**Archetypes of learning spaces**

Campfire
ex-cathedra learning

Hill
shared learning

Watering hole
participatory learning

Field
experiential learning

Cave
independent learning

Thornburg's learning modalities (*modified*)

**UNIRI**
*Strategic policies 2021 - 2025*
Strategic goals / areas

| Quantitative | | | | Qualitative | | | |
|---|---|---|---|---|---|---|---|
| 1) Learning & teaching | 2) Researching | 3) Knowledge transfer & regional involvement | 4) Internationalization | 1) Open education | 2) Innovation in research and development | 3) Social responsibility | 4) Expanding horizons via strategic partnerships |
| - quality and efficiency *student-to-teacher ratio* | - scientific and artistic production *number of publications per author* | - university-community collaboration *number of active collaborations with industry and community* | - students *share of international students* | - european quality guidelines - high completion rate - student inclusion | - diversity of fields and disciplines - interdisciplinary research - collaborative potential | - regional inclusion - knowledge transfer to the community - collaborative projects - preservation of cultural heritage | - priority partnership in education; YUFE, European Universities Initiative - priority partnership in research; VERUN |
| - flexible learning pathways *share of graduates* | - scientific impact *share of q1 and etc publication* | - funding of knowledge transfer projects | - study programs *number of programs in a foreign language* | - relevant competencies - open learning pathways - personalized curricula | - competitive research - european project initiatives - innovation and creativity | - education accessibility - equal opportunities | - strengthening visibility and collaboration - contribution to EU policies |
| - personalized approaches *share of ECTS credits earned through prior learning* | - research funding *share of research-derived income* | - funding of knowledge transfer projects *number of participants in educational programs for industry and community* | - mobility *number of academic staff in incoming and outgoing mobility* | - innovative learning methods - professional practice | - open access to science - fair competition environment - collective innovation | - inclusiveness - academic integrity - public accountability | - internationalization - mobility - digital environments - strategic partnerships |
| - relevant competencies *share of ECTS credits from courses with practical competencies* | - doctoral education *number of defended doctorates* | - regional impact *share of graduates employed in the region* | - collaboration *number of cooperation agreements with international institutions* | - digital transformation - lifelong learning | - attracting talent - career development for young researchers/artists | - transparent and participatory decision-making - public deliberations - formative impact on the community - fulfilling the SDG's | - positioning in global ranking systems - recognition within global quality frameworks |
| - Study satisfaction *satisfaction index of graduates* | | - interdisciplinary research and development *number of interdisciplinary scientific-development projects* | - activities *number of participants in international activities* | | - co-creating innovative and entrepreneurial ecosystems - community cooperation - integrated new knowledge | | |

Strategic policy of the University of Rijeka 2021 - 2025

ATLAS OF CONCEPTS

**Atlas of projects**

Energana
Vodovodna
STEP2
Zagrebačka
Artkvart
Žabica
Galeb
Rujevica
Kantrida
Hartera
Delta
Kampus
Omišalj
Turanj

Rijeka's official urban vision for 2030 positions the University of Rijeka as a key catalyst in the city's transformation into a hub of smart, digital, green, and creative industries. The University's Strategic policy in turn asserts autonomy, integrity, and radical openness - anchoring its mission in innovation, sustainability, and education aligned with a shifting labor market.

The transplantation of faculties to a centralized campus unlocks a network of university buildings in the city center. These urban sites could become extensions of the campus - semi-autonomus territories where unexpected connections spark and strategic partnerships emerge with the actors in the city's evolving innovation ecosystem.
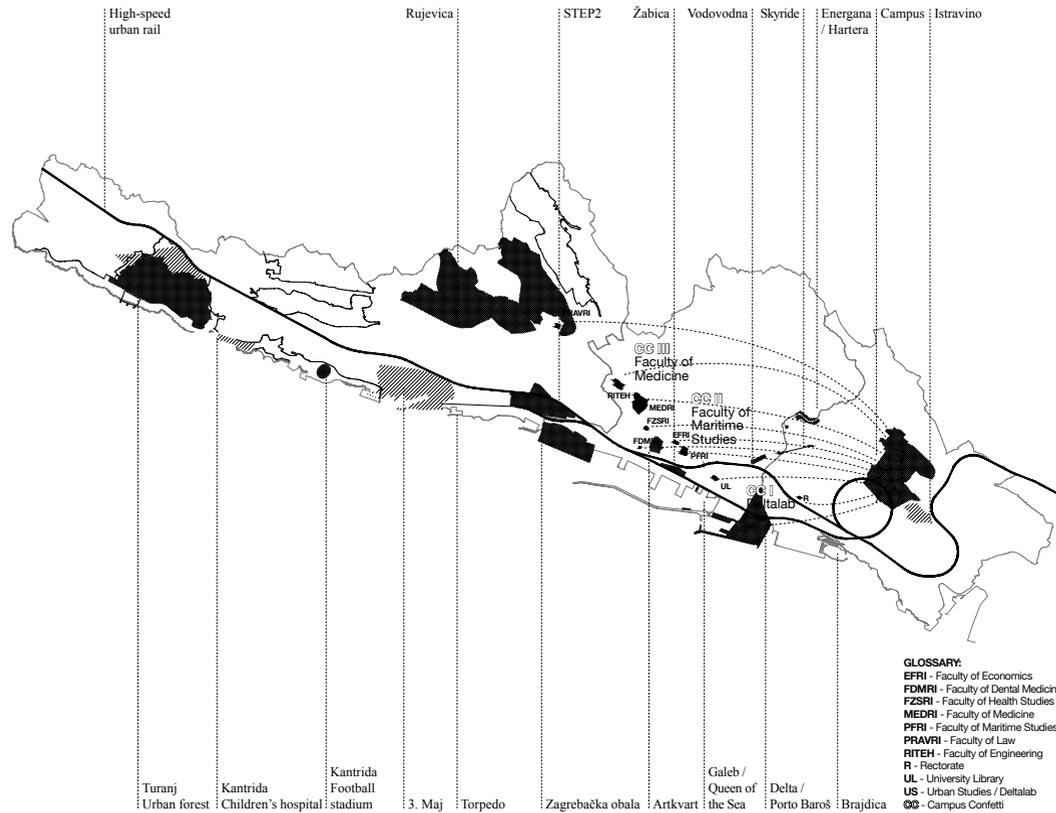
Contemporary education demands connectedness - spatial centralisation enables synergies between faculties, centers, departments, administration, students and staff. University buildings scattered across the city have become **BLACK HOLES** - closed, disconnected and unfit. Chaotic and inefficient but colorful and generative, they emerged through gradual territorial annexation - *the campus was the city*.

Rujevica, the historical center, and the University campus form a polycentric triangle of planned urban hubs. With faculties relocating to the campus, the city center is left impoverished - *the city needs the campus more than the campus needs the city*. Preservation, labor and inclusivity are the Speculations questioning the University's place in the urban fabric.



campus = city        city  -  campus        campus  +  city        city = campus
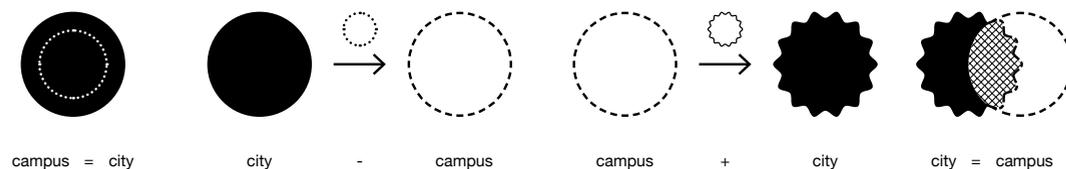
**A HERO'S JURNEY: THE CAMPUS ANCHORS ITSELF IN THE CITY RECLAIMED.**

THE CAMPUS PARADIGM IS SUBVERTED THROUGH THREE PROPOSED INTERVENTIONS IN THE LEFTOVER AREAS: CAMPUS CONFETTI I, II, III ACT AS SHORTCUTS BETWEEN THE INSTITUTION AND ITS DIVERSE CAST OF STAKEHOLDERS.

THESE ARE SPECULATIVE ENTITIES OF A UNIVERSITY EMBEDDED IN THE URBANE - OCCUPYING FORMER FACULTY BUILDINGS THAT ONCE WERE A WINE PRODUCTION FACILITY, A TRADE SCHOOL AND AN ASYLUM.
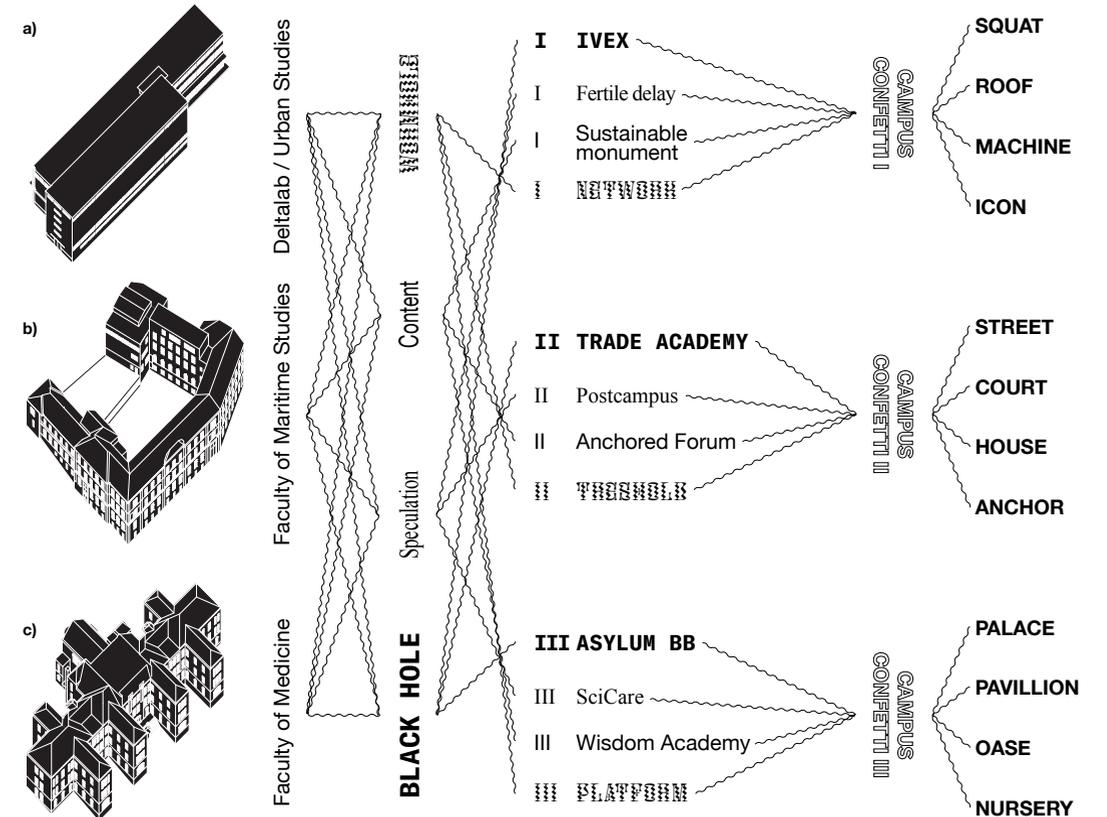


Existing buildings are reimagined through collaborative frameworks between stakeholders. Hybrid renovation models reconcile market interests with non-profit needs, anchoring the institution in the community. Contents spark programs, activities, knowledge transfers - enabling *unexpected relations between the University and the city*.

A *network* links the sites to transit corridors, tourists to researchers. A *threshold* opens academic spaces to previously excluded social groups. A *platform* facilitates new modes of knowledge transmission. These WORMHOLES are spatial structures that articulate overlooked socio-spatial phenomena.
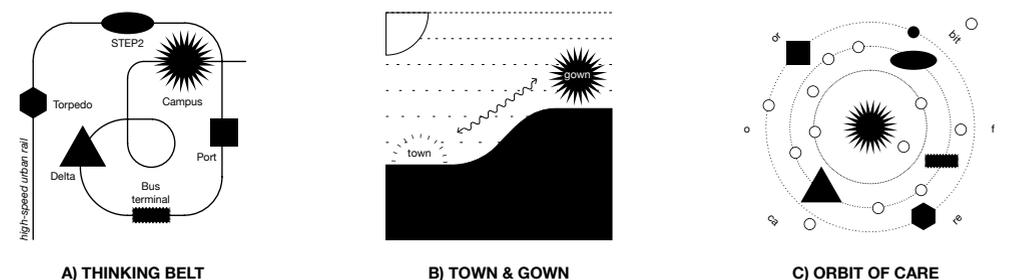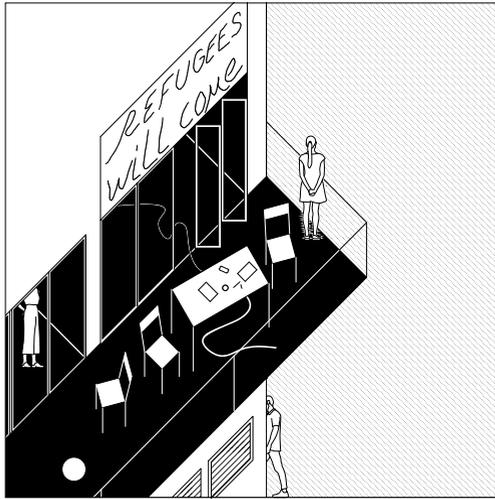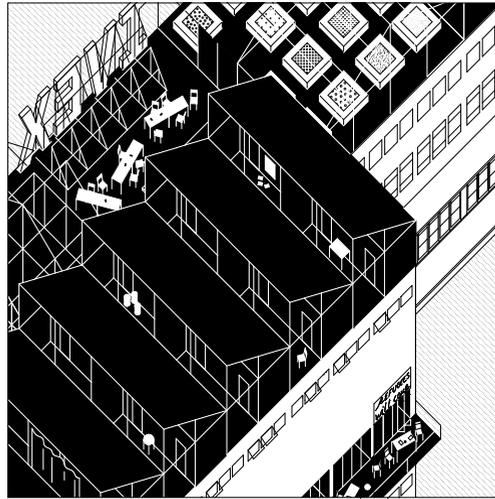


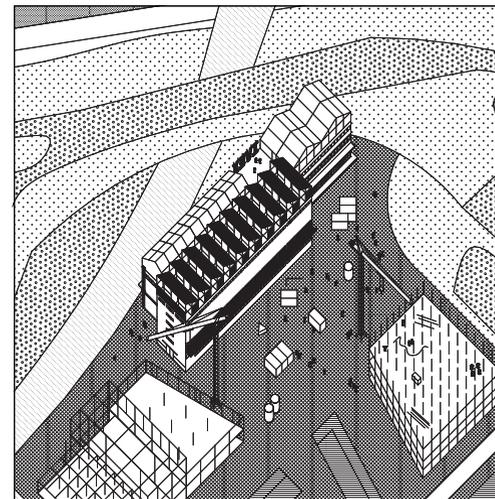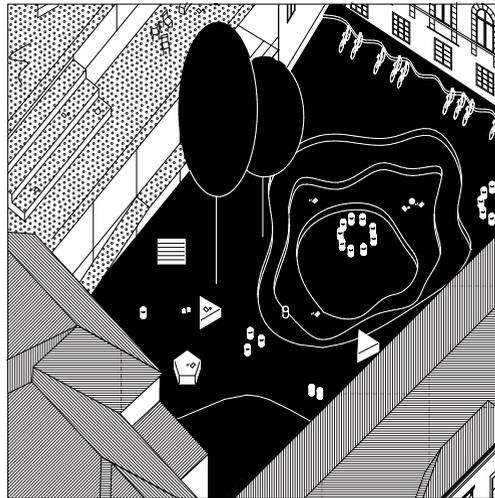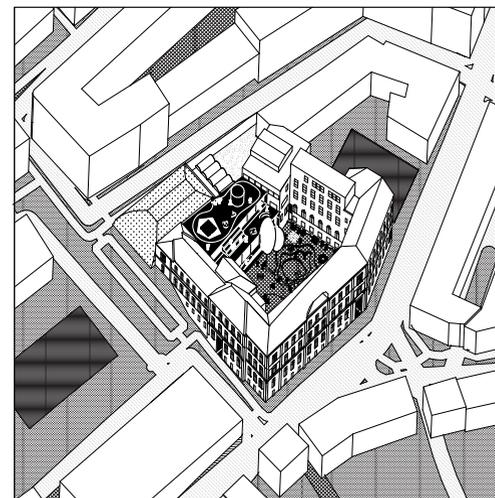A) THINKING BELT        B) TOWN & GOWN        C) ORBIT OF CARE

Contents

Deltalab

SQUAT



ROOF
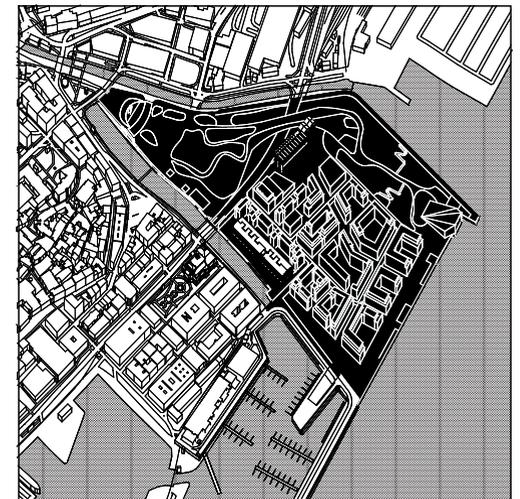


Faculty of Maritime Studies
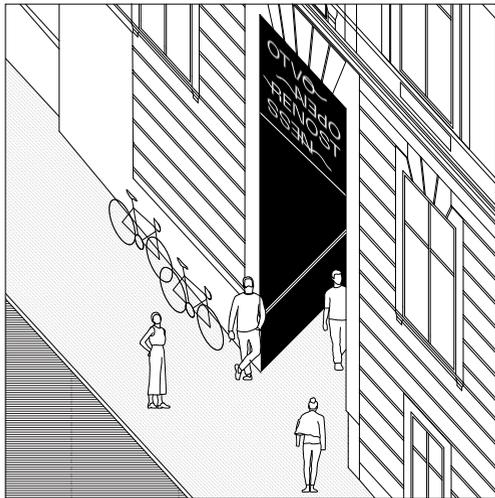
STREET



COURT
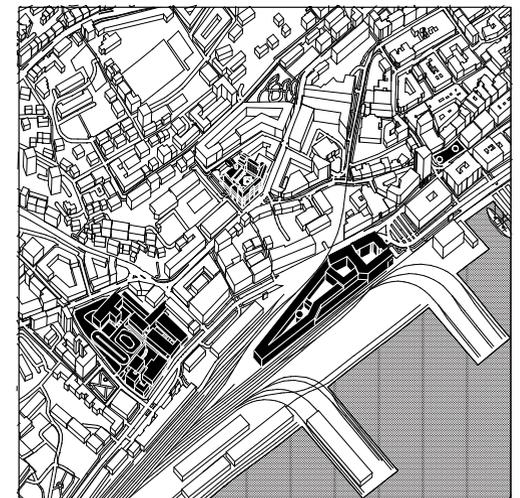


Faculty of Medicine

PALACE



PAVILLION



MACHINE



ICON

CAMPUS CONFETTI I



HOUSE



ANCHOR
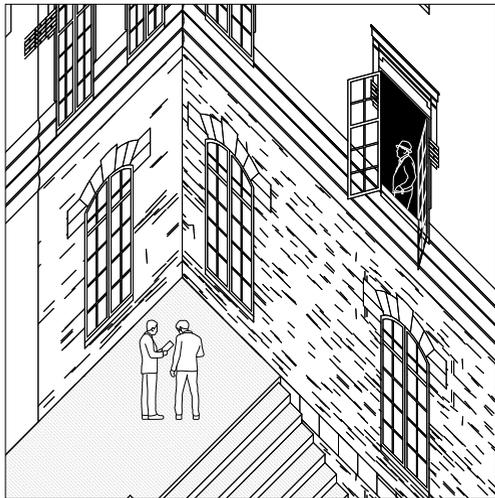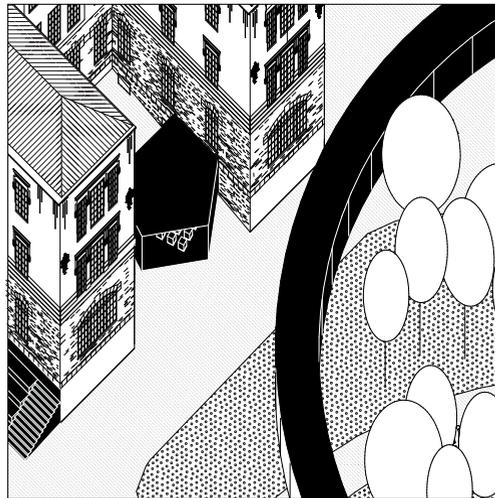
CAMPUS CONFETTI II



OASE
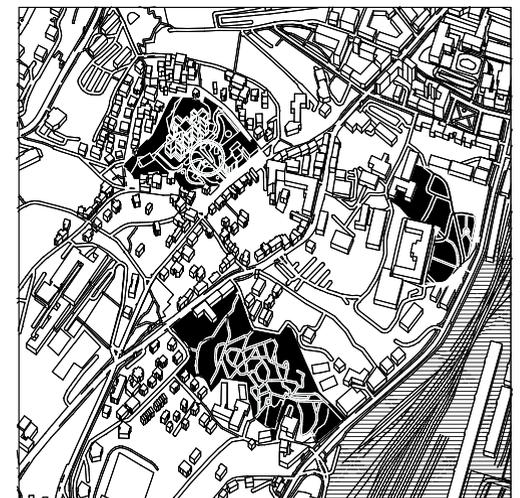


NURSERY

CAMPUS CONFETTI III

MATRIX

**CAMPUS CONFETTI**