

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Konstantinos Doukas
Student number	5632625

Studio		
Name / Theme	Cross Domain City of the Future	
Main mentor	Joran Kuijper	Design
Second mentor	Piero Medici	Building Technology
Third mentor	Stavros Kousoulas	Research
Argumentation of choice of the studio	<p>My main interests, in recent years, revolve around the self-sufficiency and economic stability and resilience of the countries. The still-going global phenomena and geopolitical conflicts, (e.g., Coronavirus pandemic, war between Russia and Ukraine, while also accounting the relocation of the major European industries to other continents, since already the end of the last century (Beck, 2015), come as a reminder that a key factor for economic stability of a country is the co-existence and co-prosperity of all production sectors (agriculture, industry, services), so that each country has its own shield in most, if not all, geopolitical chain reactions.</p> <p>Regarding the abovementioned general reflection, I believe that through architecture, especially regarding the building reserve of abandoned industrial complexes, we can propose the revitalization of an urban industry and the reuse of all old factories, not as cultural and industrial monuments of a bygone era, but as poles of economic revitalization and development.</p> <p>Based on the above, the Heritage Graduation studio seems like the appropriate choice, however, because I do not believe in treating the older industrial complexes only as "monuments", but rather as buildings that still have something to offer and a new story to tell in The City of the Future.</p>	

In conclusion, The City of the Future graduation Studio gives the freedom for formulating and presenting our own vision for a future regarding our own interests, that could not be possible in other studios.

Graduation project

Title of the graduation project

Industrial Revival: A story of a new industry in the city center of Athens

Goal

Location:

Old Athenian Papermill Factory in Votanikos area, Athens

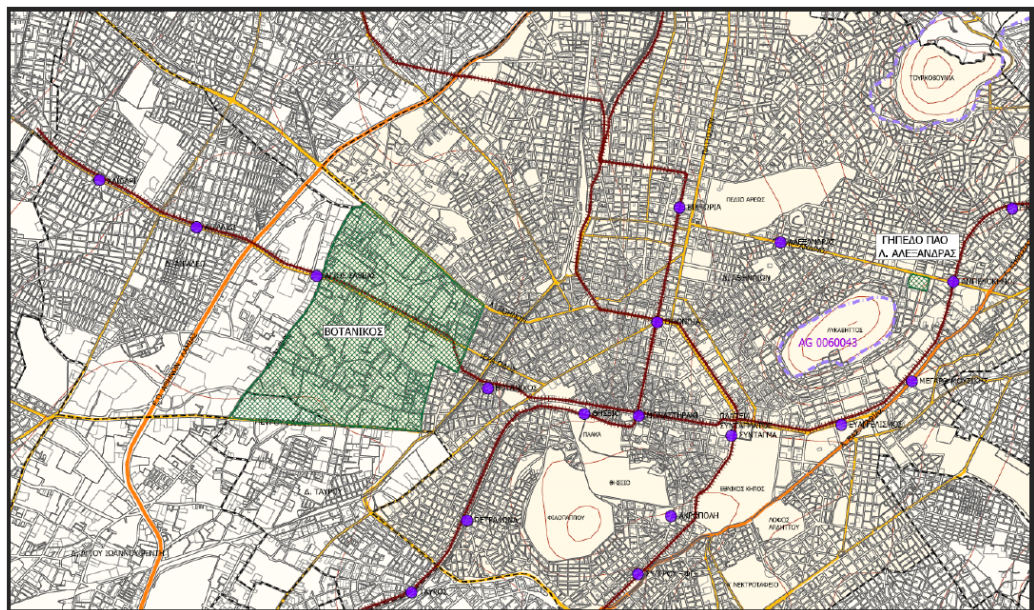


Figure 1: Votanikos area (in green) next to the city center of Athens (center of the map, east of the green area), (purple dots are the metro-line stations (Tchadari, 2019, p. 106)



Figure 2: The remaining buildings of the Papermill factory's recent demolition on mid- December 2022 (Source: (Τέλος εποχής για το κουφάρι της Softex [End of an era for the Softex carcass], 2022))

<p>The posed problem,</p>	<p>A more general concern of mine, as I mentioned briefly reasoning the choice of this studio, has to do with the ever-increasing desolation of industrial districts in European cities.</p> <p>Under this general consideration, I chose Athens, the capital of Greece, as the point of the project where the city's industrial area is next to the heart of Athens. Elaionas (trans. Olive tree forest), as the industrial area is called, a name inherited from antiquity as it was the largest forest of olive trees in the Attica basin (Mpfofilias, 2007, pp. 83-86), was the area where in the 20th century the Athenian industries developed in a completely unregulated manner. A result of this unorganized construction is that between the 90s up until the recent years, when the heavy industries relocated outside the metropolitan area, there have been countless studies and preliminary projects on the integration to the city plan of Elaionas without significant success, while also the economic crisis of 2008 put a stop to any tangible plans (Panayotopoulos-Tsiros, 2016, p. 9).</p> <p>An area referred to as the "black hole" of Athens, yet with great potential, as it is located at a focal point in the city yet acts as a barrier between the center and the western suburbs. An infrastructural maze of old factories, warehouses and uses that do not belong to a metropolitan city center (Tchadari, 2019, pp. 18-20).</p> <p>The Northeastern segment of Elaionas, the part that belongs to the municipality of the city center of Athens, is called Votanikos at a distance of only 2km from the Acropolis. Points of interest in the area are the Agricultural University, Iera Odos, a road that connects the center with the western suburbs, (built on top of the ancient road of the same name) and finally the buildings of the former Athenian Papermill factory which will be the point of interest in my graduation work.</p>
<p>research questions and</p>	<p>Given the above facts, the prevalent concern revolves around the future of this abandoned factory as well as the other issues of the area.</p> <p>As such, the main question comes as follows; How to reintegrate the old papermill factory as a new city-friendly industrial hub inside the existing Athenian urban tissue?</p> <p>Subquestions 1 & 2: - What is the actual state of today's Votanikos area and its spatial relation to its neighboring districts? -and, how is this area unique from the rest of the Athenian Urban tissue? Subquestion 3: - What are the parameters that would contextualize and drive the strategies for a design approach?</p>
<p>design assignment</p>	<p>The design approach resulting from the above is divided into two parts:</p>

<p>in which these result.</p>	<p>A) The main assignment The redesign of the industrial buildings, so that:</p> <ul style="list-style-type: none"> i) To cover the needs of a new industry, which ii) It will both cover the need for employment in Athens, as well as become an example of the coexistence of an industrial zone within the fabric of the city. <p>B) Secondary, yet necessary The design integration of the above with the features and infrastructure of the nearby area, such as:</p> <ul style="list-style-type: none"> i)The connection with the historical route of Iera Odos and henceforth the metro line, ii)And the uncovering of the small river <i>Prophet Daniel</i>, creating a much-needed green zone in the area
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Process

Method description

With the help of literature sources such as that of Philip Black's and Taki Eddin Sobi's "The Urban design Process" (2019) and their methodological approach of urban re-planning, I came to the following conclusions: Regarding the overall approach through the historical analysis of spatial expansion in Votanikos, the ideal way for the visualization of the present is through analysis of morphology, both for built and physical environment. Correspondingly, the Black's and Sobi's book is referring and propose as a better methodological study of urban planning the following four stages; analysis, pre-design, design, and post-design, incorporating the human scale in a similar way to Jan Gehl (2010).

Consequently, the method of preliminary analysis and planning of the area will be as follows:

- Mapping of land uses and infrastructure in place; external and internal connections (roads/metro-lines, traffic output and input), utilities and systems (water supply, power supply)
- Analysis of the needs of the modern city of Athens, so to find a proper industrial use, in order for it to be both profitable and relevant to the city and its people
- Morphological Mapping of both built and unbuilt environment of Votanikos area and its relationship (contrast or/and similarities) with its neighboring districts through axonometric drawings

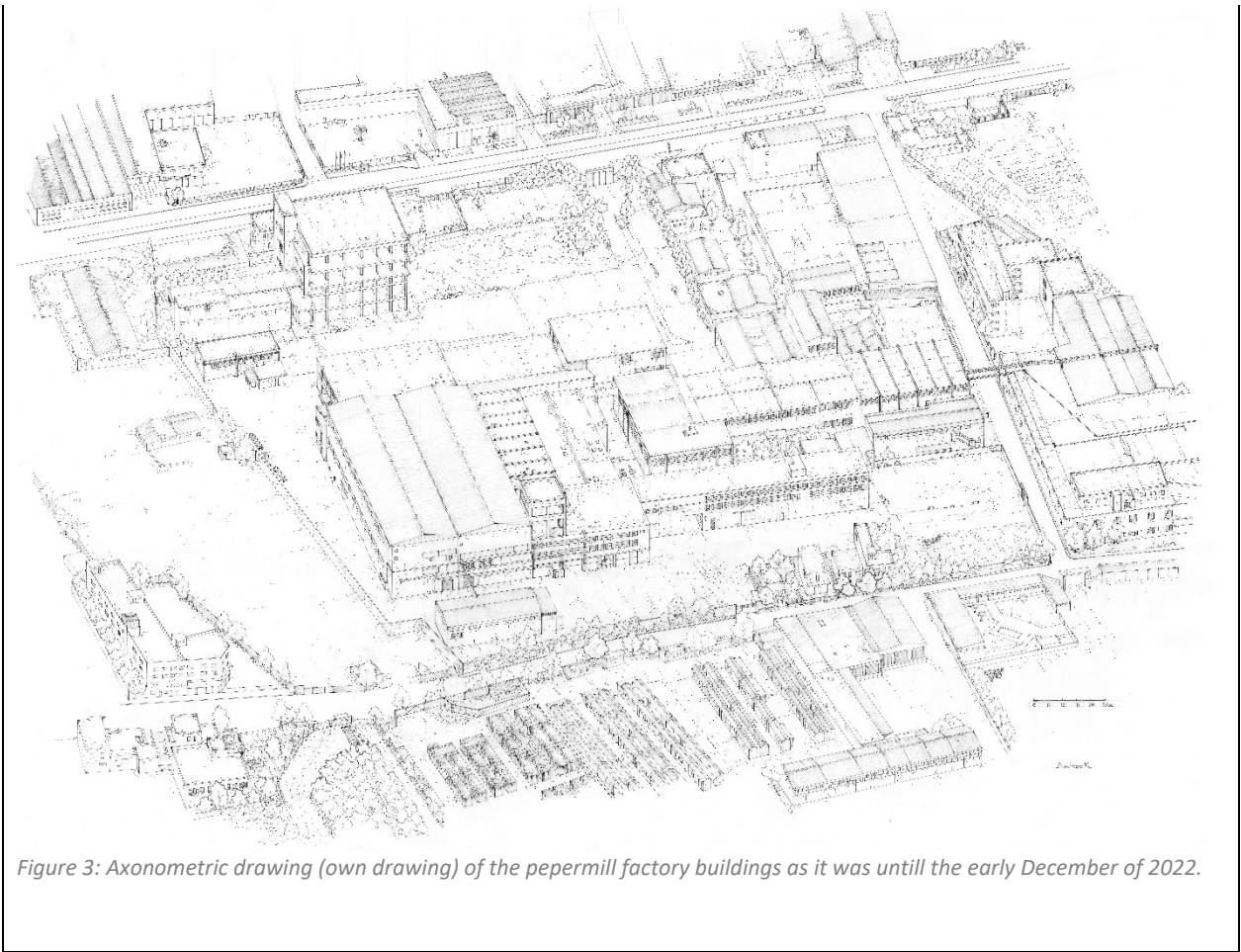


Figure 3: Axonometric drawing (own drawing) of the pepermill factory buildings as it was until the early December of 2022.

Literature and general practical preference

The literature will consist of studies of urban architects on modern ways of re-designing building complexes in relation to both human and city-scale, as well as historical literature around both the current European industrial status in addition to the urban development of the area of interest from the mid-20th century until this day.

As such, the main bibliographical sources (also used for this report):

Andrioti, N., Kanetaki, E., Drinia, H., Kanetaki, Z., & Stefanis, A. (2021, October 5). Identifying the Industrial Cultural Heritage of Athens, Greece, through Digital Applications. *Heritage*, pp. 3113–3125.

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- Panayotopoulos-Tsiros, D. (2016). Eleonas: Urban Voids as Opportunity for a Water Sensitive Approach to the Design of Cities. *ATINER'S Conference Paper Series* (pp. 3-17). Athens: Athens Institute for Education and Research.
- Sapountzaki, P., & Wassenhoven, L. (2004). Spatial Discontinuities and Urban Transformation: The example of Elaionas in Athens. *Third International Conference on Urban Regeneration and Sustainability "The Sustainable City 2004"* (pp. 1-11). Siena: University of Siena.
- Tchadari, S. (2019). *Αστικοί μετασχηματισμοί στην εποχή της κρίσης, με αφορμή τις μεταλλαγές των δραστηριοτήτων και των πολεοδομικών πολιτικών στον Ελαιώνα της Αθήνας [Urban transformations in the era of crisis, prompted by the alternations of activities and urban planning policies in Eleonas, Athens]*. Athens: National Technical University of Athens.

Tsagkarakis, K. (2007). Η Βιομηχανία ως Αστική Πολιτιστική Κληρονομιά: Σε Αναζήτηση της Νέας Χρήσης [Industry as an Urban Cultural Heritage: In Quest of Contemporary Use.]. *Evolution Observatory - εν* (pp. 4-22). Athens: Athens University of Economics and Business.

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Reflection

In conclusion, my project questions and will try to design a future for desolated industrial urban landscapes, in this case, Athens, where the old industrial complexes are in the center of a huge European metropolis. The way of designing a proposal is relevant to the small and large scales of the architectural profession, and compliments the thematic of the studio "Cities of the Future".

Additionally, my proposal will try to solve and give hope for the present and future of Athens and its denizens through the simultaneous treatment of two contemporary problems; the future of the industries in the center of the city of Athens, and "brain drain" phenomenon (Marinakou, Giousmpasoglou, & Paliktzoglou, 2016), the problem of the Greek population on emigration of highly educated people outwards, to more advanced economies.