

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	Bettina Edda Freiin von Hodenberg
Student number	5140277

Studio		
Name / Theme	Complex Projects Graduation Studio Beirut, Lebanon	
Main mentor	Dr. O. Caso	Architectural Research
Second mentor	H.L. van der Meel	Architectural Engineering
Third mentor	M. Mateljan	Architectural Design
Argumentation of choice of the studio	The studio was chosen due to interest into Beirut as a city with a background of a multiplicity of layers which can be perceived on different scales. Considering the wide variety of people, different religions, the complex historical background as well as its rich culture as a potential for change in an almost hopeless situation that Lebanon finds itself in currently, has been the main driver for motivation. The translation of these layers into the urban environment and their articulation into a physical fabric is therefore the main interest.	

Graduation project	
Title of the graduation project	House of Textiles. Upcycling Flagship Store
Goal	
Location:	Beirut
The posed problem,	In Lebanon, waste is still considered as a dead-end scenario of a linear process. The preferred waste management method of landfilling and dumpsites, accounting for 85 percent, reflects the country's perspective on waste solely seen as a substance without any value. Therefore, altering Lebanon's perception on waste from a burden into a resource must be the first step towards exploiting the unused potential of its huge amounts of waste. The shift towards alternative waste treatment methods through the activation of Lebanon's heritage and tradition in craft making can furthermore

	<p>generate progress and enable global competitiveness within the threatened manufacturing production.</p> <p>Lebanon’s textile industry, one of the oldest parts of the craft sector, is still greatly embedded in the collective memory. However, with the discovery of low-cost fabrics, Lebanon’s silk enterprise became obsolete. This disappearance is not only a danger to a treasure of the country’s heritage, but also an underestimated and unexploited potential for its economic development.</p> <p>Thus, the hypothesis of turning the country’s plastic waste into textile materials to feed the sector with innovation and competitive qualities will be the key provider for this research.</p>
<p>research questions and</p>	<p>How can an architectural intervention encourage the perception of waste as a resource instead of a burden through the activation of Lebanon’s textile heritage?</p> <p>How can such an intervention act in an educational, communal, as well as a commercial way?</p> <p>How can it encourage innovation, social cohesion, new entrepreneurship, and local identity?</p> <p>How can the transformation process of turning waste into a resource be inspirational for design and possibly be incorporated and eventually reflected in the building?</p>
<p>design assignment in which these result.</p>	<p>To convey the message of the proposed waste-upcycling production within Lebanon’s textile industry to the public, a representative flagship project needs to be established. The design of such an institution aims to follow a set of responsibilities and performance ambitions. First, the project intends to embody a transparent representation of the production’s identity which needs to be clearly perceivable from the outside. Secondly, it should be inspiring, as well as encouraging for public participation. Thirdly, it aims to act in a social, cultural, educational, as well as an economic way.</p> <p>These ambitions can further be translated into different layers. On an urban scale, the flagship house must embody a new important attraction node and therefore be situated in a very prominent location. This location should strategically be connected to the topic of waste, as well as the topic of textile making. On a building scale, the project aims to partly represent its identity using</p>

	ecological materials. Circular, up-cycled materials, as well as transparent textiles and fabrics, are hereby considered. Furthermore, the project encourages inspiration by visualizing the whole production process in the building and informing about plausible DIY-techniques.
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Process

Method description

Within the design, as well as the research process, three different methods have been utilized and will further be utilized in the coming semester. These include the approach of fieldwork, explorative interviews, as well as the analysis of case studies. The research follows a qualitative approach to data collection, mainly based on non-participant observations, mapping, field documentation, collection of previously published research, (archival) literature review, online resources, image analysis and the analysis of relevant precedents and practices. Literature and online resources represent further supportive investigations on an urban, as well as a historical layer.

Literature and general practical preference

Literature review:

Arthur D. Little (2018). The Lebanon municipal solid waste crisis and pathways forward. Insights into longterm solutions for the municipal solid waste crisis.

Atyah, M. (1964). Cotton Textile Industry in Lebanon.

Boswall, J. (2019). Lebanon: the state of waste. Heinrich Böll Stiftung.

Deberry-Spence, B., Duhachek, A., Kozinets, R., Nuttavuthisit, K., Sherry, J., Storm, D. (2002). Themed Flagship Brand Stores in the New Millenium: Theory, Practice, Prospects. Journal of Retailing.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Gmbh (April 2014). Country report on the solid waste management in Lebanon.

Friedrich Neumann Stiftung & The Samir Kassir Foundation (2020). Craft for Impact. Supporting Craft as a Socio-Economic and Cultural Development Vector.

General Directorate of the Ministry of Industry (2018). A Study on Clothing and Textiles Sector in Lebanon.

Hebel, D. E., Wisniewska, M. H., Heise, F. (2014) Building From Waste: Recovered Materials in Architecture and Construction. 2014 Birkhäuser Verlag GmbH, Basel.

Hilal, N., Fadlallah, R., Jamal, D., El-Jardali, F., K2P Evidence Summary (2015). Approaching the Waste Crisis in Lebanon: Consequences and Insights into Solutions. Knowledge to Policy (K2P) Center.

Human Rights Watch (2020 June 9). Lebanon: Huge Cost of Inaction in Trash Crisis.

McDonough, W., Braungart M. (1958). Cradle to cradle : remaking the way we make things. London Vintage.

Venturi, R. (1966). Complexity and Contradiction in Architecture. The Museum of Modern Art.

Practical reference:

Christ & Gantenbein. Home of Chocolate. 2020. Kilchberg, Switzerland.

RKD. Guinness Storehouse. 2002. Dublin. Ireland.

Zumthor, Peter. Kunsthaus Bregenz. 1997. Bregenz, Switzerland.

KGDVS. Tim van Laere Gallery. 2019. Antwerp, Belgium.

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

The project's concept, perceived in a wider context can be found in the overall approach of TUDelft's Architecture master track as well. The diversity of topics, together with the symbiosis of different aspects translates back to the University's philosophy of blending knowledge and skills from different points of view together. Interdisciplinary and thinking in different boxes allows to extend perceptions, perspectives, as well as one's imagination. Moreover, these diverse viewing points will make the project more grounded, realistic and sustainable.

2.1 Social relevance

The home of textiles deals with the revival of Lebanon's textile industry. The manufacturing of textiles still carries a big part of its living cultural heritage today. Lebanon's treasure of its local, historical craft making tradition is both socially, as well as culturally valuable. It is strongly embedded in the collective memory of Lebanese artisans and played a crucial role in historical, economic developments.

The revival of this industry could potentially open new social grounds for Beirut and Lebanon.

2.2 Scientific relevance

Since the project deals with the perception of waste and its unexploited potential as a resource, there is a clear translation to this value within the context of the built environment. This translation aims to be formulated through new ways of materialization. The current spectrum of possibilities should be fully exploited and potentially be further explored and extended.

Furthermore, the project aims to provoke this ecological urgency in the context of an ignorant government of Lebanon even more.

Time Planning

Week 1.1 site analysis and massing options

Week 1.2 program analysis and programmatic options

Week 1.3 analysis on the site ambition and design options

Week 1.4 analysis the site vision and revise design vision

Week 1.5 Presentation P2.5

Week 1.6 functional research and develop plans

Week 1.7 reference research and develop plans

Week 1.8 structure research and develop sections

Week 1.9 reference research and develop sections

Week 1.10 Presentation P3

Week 2.1 research on materials and developing materials

Week 2.2 research on structural systems and developing dorm details

Week 2.3 research on facade and developing facade

Week 2.4 integrating individual work into vision

Week 2.5 Presentation P4

Week 2.6 finalizing research and design brief

Week 2.7 finalizing research and design brief

Week 2.6 finalizing research and design brief

Week 2.8 finalizing research and design brief

Week 2.9 visualizing design

Week 2.10 Presentation P5