



Architecture & Dwelling

TU DELFT | FACULTY OF ARCHITECTURE AND THE BUILT ENVIRONMENT
DEPARTMENT OF ARCHITECTURE | CHAIR OF ARCHITECTURE & DWELLING

GRADUATION PLAN

Master of Architecture, Urbanism & Building Sciences

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B - Studio

a) Architecture & Dwelling, Global Housing, Addis Ababa Living Lab.

Global Housing Graduation Studio: Addis Ababa Living Lab

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c) Argumentation of choice of the studio:

The world is currently witnessing a step change from a traditional market economy towards a technological market economy. I witnessed how the developing countries are impacted far more than the more economically developed countries. Africa is leap-frogging from a traditional market towards a digital one. Most countries in Africa and Asia are rapidly progressing from primary- towards secondary sector economies, in turn encouraging the population to dwell in the urban landscapes. As a result, the cities have housing shortages which are often not fully addressed by local governments. The rapid urban development in the Global South asks for a critical design task addressing cheap and innovative housing solutions. Addis Ababa is one example that faces this housing shortage. Local parties attempt to fill the housing shortages by mass constructing homes. However, the economic pressure often leads to poor construction quality, overcrowded households and unsafe living environments. As a result to the housing backlog urban dwellers construct unmonitored informal housing that don't have access to services such as electricity, water or sewage. The reason I chose this studio is because it aims at helping the majority of the world's population instead of the I see a value in the sheer number of people that are challenged by this trend. Though the studio is focused on Addis Ababa, the housing challenges are found in all developing countries making it a substantial challenge for now, and the coming future.

C - Graduation Project

['SymbioCity']

Addis Ababa Student and Family Cohabitation

C.1 _ Goal

The rural-urban migration trend in Ethiopia has shown a rapid increase as the primary cities develop. With the current housing backlog in Addis Ababa these migrants – with exception of a few – face the dilemma of relying on relatives and friends for accommodation. This leads to unforeseen housing challenges such as unmonitored and overcrowded households. In order to gain a clear picture of the circumstances that this project deals with, I first highlight four important forces that play an important role in housing this focus group; **Migration, Enterprise/Small Industry, Education, and the Social Housing Economics** of Addis Ababa.

Addis Ababa grew its population from 2.3million in 2000, to 4.5million in 2019¹. The growth is mainly a result of an ongoing national rural-urban migration. An estimated 46% of the population in the city is classified as having migrated there in their life-time². The construction boom in 2008 led to many people migrating for job-opportunities. In absolute numbers Addis Ababa has been the biggest internal migrant destination today, with close to 40 percent of all rural-urban migrants moving to the capital³. When we look at the characteristics of these migrants we see that the majority are young people (between 15-35) seeking opportunity⁴. Upon arrival it is common for migrants to move in with relatives or friends, compensating their landlord through domestic work or money earned.

As in most parts of Africa, SMEs are the backbone of growth in Ethiopia and represent 70-80% of the economy⁵. But the future of the Ethiopian economy with Addis Ababa as its capital does not lie simply in the traditional informal SMEs prevalent in many African cities, such as market carpentry, leather crafts and sowing garments. To progress with real economic development and impact growth, the quality of SMEs needs to thrive from “cottage industry” into a technical/professional level of industry and services. Promoting an environment where the youth can acquire the relevant skills, allowing young entrepreneurs to thrive are important factor in making this change. Stimulating technological advance in industry is a necessity to promote economic growth⁶. To have a greater impact on the economy SMEs need to play a meaningful role and take their deserved place in fulfilling the evolving needs of a rapidly growing city.

Higher education in a developing country has multiple tasks, including building, training of highly skilled manpower, conducting research as being centers of

¹ Macrotrends, *Addis Ababa, Ethiopia Population 1950-2019*, (United Nations, 2019).

² Bundervoet, T., (The World Bank, 2018) 9.

³ Ibid., 4.

⁴ Ibid., 37.

⁵ Maritz, J., *Opportunity for Ethiopian SMEs to Tap into the Global Market*, (Ethiopian Embassy, 2014).

⁶ M Creso Sa, *Perspective of Industry's Engagement with African Universities*, (African Association of Universities, 2015) 7.

excellence⁷. Improving the access and completion higher education would in turn accelerate the country's progression. Education and demographics can be seen as drivers of this migration. Rural dwellers who had at least some secondary education (not necessarily completed) had a likelihood of close to 30 percent to migrate to an urban area between 2008 and 2013, and this rose to close to 60 percent for people with post-secondary education⁸. Students who proceed to post-secondary education need to move to the main cities. Universities in Ethiopia are currently located in the primary cities, the biggest of which, Addis Ababa, Jimma, Mekelle and Bahir Dar. As the education and mobility improves in rural Ethiopia, the rural youth continues to become more educated and patterns of rural-urban migration will increase. The general development and growing market economy of Addis Ababa will lead to a need for more quality skilled professionals.

The government's current 'inclusive' lottery system gives all nationals the opportunity to buy a home with a governmentally supported 'down-payment' depending on one's salary. Even though Ethiopia does not allow ownership of land, this Low Cost Housing system has created a form of privatization. The program does not directly disregard low-income residents, but – through the imposed model of privatized ownership – “indirectly favors middle and upper middle class citizens who can afford the respective payments”⁹. As a result this has induced segregating effects driving up rent prices to the level of middle and upper middle class, and thus, limiting options for the lowest-income bracket. In the period of the Master plan (2002-2012), 131,000 units were constructed, meeting only 40% of the effective demand (245,088 housing units)¹⁰. The growing housing need and an inadequate existing supply for housing (due to long construction periods) reasons why prices are currently seriously unaffordable for almost all households in Addis Ababa¹¹.

The problems arising from above are a combination of **the housing shortage and the youth seeking opportunity**. Above forces each throw up issues that in their own right cannot be solved. If these problems are not addressed, the influx of young rural-urban migrants will worsen the over-concentrated informal settlements throughout the city, many of which are currently classified as slums by the UN. Ultimately, Addis Ababa will see an increase in the amount of slums and further complicate the development of legitimate structures.

In a country where higher education is only found in primary cities, there is a need to address the problem of housing the youth while also taking in account for their post-academic careers. By raising the question, *“How can we combine existing- and new residents into a mixed-use housing scheme that fosters local entrepreneurship in Addis Ababa”*. We can investigate a way in which we can rehousing the current

⁷ Psacharopoulos, G., *Higher Education in Developing Countries: the Scenario of the Future*, (The World Bank, 1991).

⁸ Bundervoet, T., (The World Bank, 2018) 16.

⁹ Delz S., *How Concepts of Individual Home-Ownership and Housing Blocks Still Walk Abroad*, (ETHzurich, 2016) 4.

¹⁰ Elias Yitbarek Alemayehu, *The Transformation of Addis Ababa : A Multiform African City*, (Cambridge Scholars Publisher, 2018) 57.

¹¹ Kiros Aquabamecheal, *Factors Affecting the Real Estate Market: the case of Addis Ababa City*, (Addis Ababa University, 2009) 5-6.

residents avoiding eviction while also fostering starters coming to the city, in a symbiotic way.

We can propose that by creating a hub of creativity in technological enterprises will foster a dynamic creative zone within the city that provides accommodation as well as job opportunities. In the last forty years governments have stimulated linkages between industry and academia¹². Countries in the Global North have a large history of fostering university-industry relationships, however, these remain focused on developed industrial economies, and are still quite limited when it comes to growing African economies¹³. The co-existence of youth, students and enterprise in one site will contribute to innovation in several ways including: providing *technical assistance, engaging in consulting and commercialization activities*¹⁴.

This growing issue can be architecturally addressed by introducing a 'Symbiotic' neighborhood where academics and enterprises can profit from one another. Student housing along-side existing advanced enterprises can become a catalyst to connect graduates with job opportunity and help local SMEs to thrive. Some appropriate enterprises which could be concentrated near students could be: well-established SMEs (e.g. architect offices) and young dynamic SMEs (e.g. IT services) and business incubators¹⁵. The Gerji Site is well-positioned within one kilometer from the Addis Ababa Ring Road allowing residents to be well-connected to Addis. Besides the mobility, the site is also in close proximity to the Unity University, The Korean Hospital and Bole International Airport. Access to these technical sites makes Gerji an appropriate location for further research on the topic of mixing starters/student housing and advanced SMEs on one integrated site.

“How can we combine existing- and new residents into a mixed-use housing scheme that fosters local entrepreneurship in Addis Ababa”

¹² M Creso Sa, *Perspective of Industry's Engagement with African Universities*, (African Association of Universities, 2015) 7.

¹³ Ibid., 7.

¹⁴ Ibid., 7.

¹⁵ **Business Incubator**; company that helps new and startup companies to develop by providing services such as management training or office space.

C.2 _ Process

In this section, you should identify the methods and processes that you'll use in your graduation project, as follows:

- a) Method description;

Emperical research is conducted through **Ethnographic Studies**, **local interviews** and **analytical studies**. These were done mainly during the field research period in November 2019. However, I've also had on going discussions with local students and residents since return to The Netherlands. **Secondary research** was conducted using literature, historical pictures and documentaries.

The Ethnographic research is aimed at visualizing the habits, cultures and traditions that are local to Addis Ababa and Ethiopia as a whole. The process results in discussions, interviews and obervations are used to visualise settings in which typical local activities take place. There was a focus on domestic activities, income generation, borders and boundaries and shared spaces. This research method allowed us to compare lifestyles in different areas of Addis Ababa, but also compare it to the lifestyle of different countries.

- b) Literature and general practical preference;

Inspirational literature:

Sennett R., *Building and Dwelling: Ethics for the City*. (Penguin, 2018).

Rybczynski, W., et. al., *How the Other Half Builds: Vol 1*. Space, 1984.

Drew J., Fry M., *Village Housing in the Tropics*, (L. Humphries, 1947).

Inspirational figures:

Elias Yitbarek Alemayehu – Architect and urban planner with principal areas of expertise on housing, 'slum' upgrading and urban redevelopment.

Constantinos A. Doxiadis – Architect and Town Planner

Jane Drew – for designing social and public housing in West Africa, India and Iran.

Maxwell Fry – for designing Schools and Universities in West Africa and India

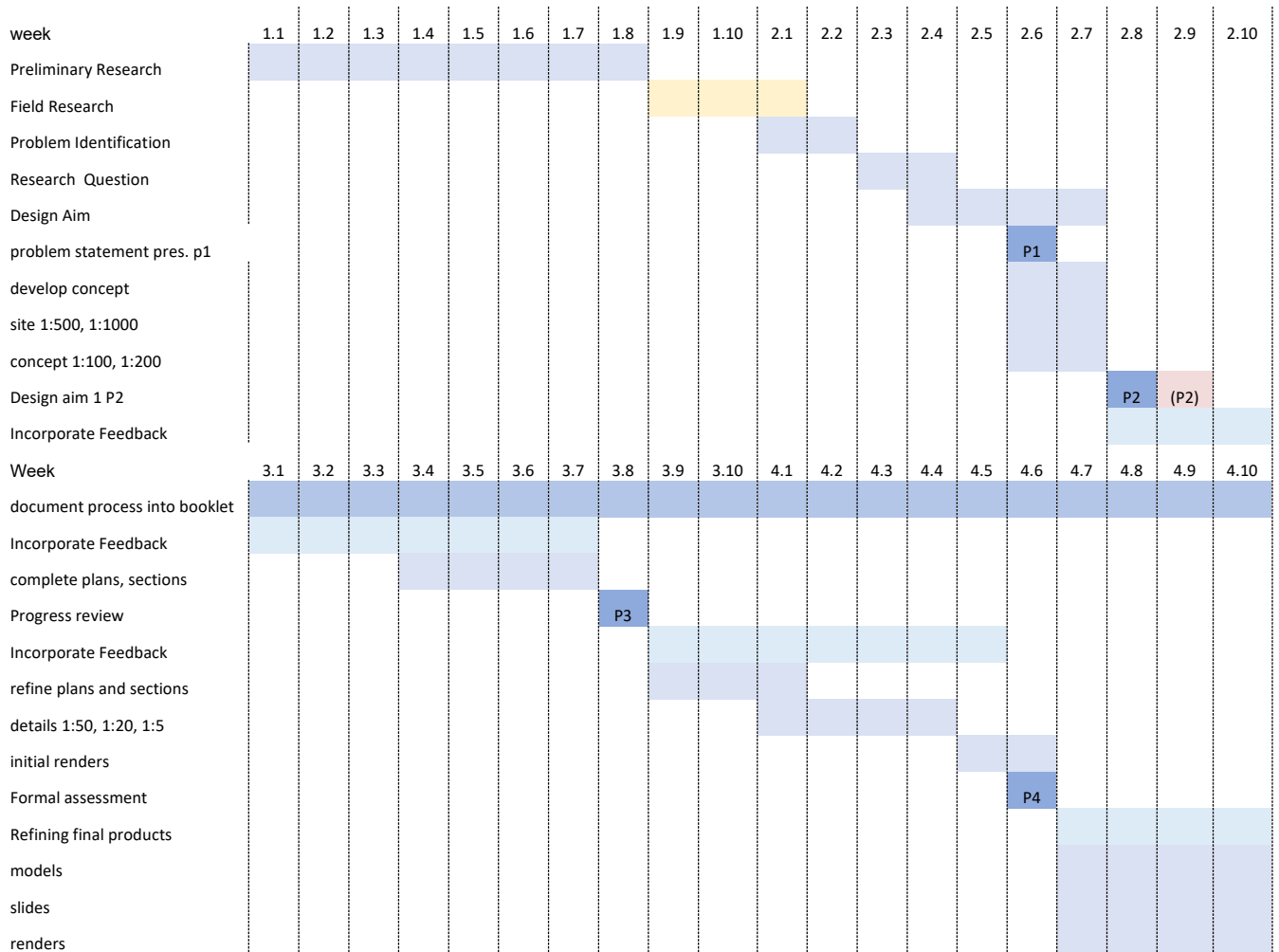
Richard Sennett – for comparing experiences in different urban settings around the world

C.3 _ Relevance

Housing shortages have become one of the most problematic challenges in rapidly developing countries. The absolute number of people affected by this trend makes this topic very relevant to our current society. This studio is focused on Addis Ababa as a city however, my approach towards this should be applicable to multiple cities, or countries. The focus on student housing should improve access and completion of universities whilst also addressing the challenge of job availability. The framework chosen for this project cohabitates students and middle income families. Where families rent out spaces for students while being able to expand over time. The research done during the course of this project should be useful for new inclusive housing strategies that encourage students to attend higher education and families to

rise on the property ladder. The scope of this project also reaches out towards finding cheap, high-quality building methods that consider the local environment.

C.4 _ Time planning



C.5 – List of References

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- Psacharopolous, George. "Higher Education in Developing countries the Scenario of the Future." *Higher Education*, (The World Bank, 1991), 3.