

2121: A Zurich Odyssey

Masterthesis Fall 2021

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A house built today will last eighty to a hundred years: 2021-2121, thus each new building not only relates to the present, but also includes speculation about how our future will change and what future we envision.

For Zurich, there are already accurate forecasts of population growth and climate change up to 2040. An additional 100'000 people are expected by 2040¹. This is not insignificant by Swiss standards. By way of comparison, 80'000 people live in the small city of Lucerne at the moment. At the federal level, scenarios are also being developed for the individual cantons.² The demographic aging of the population will intensify by 2050, despite immigration and high birth rates. The proportion of people of retirement age in the canton of Zurich will rise from 14 percent (1990) to a maximum of 23 percent in 2050.³ However, a scientific study in *The Lancet* assumes that the Swiss population, after peaking at around 10 million in 2048, will fall back to current levels in 2100.⁴

The climate analyses for Switzerland distinguish between scenarios with and without climate protection (CH2018).⁵ In both cases, the Swiss climate will change significantly. Due to its special geography, Switzerland will warm faster and more strongly than the rest of the surrounding regions. The future climate will bring less precipitation in summer and less snow (more rain) in winter. This will strongly influence the water balance in Switzerland and floods will occur more frequently. In cities, the occurrence of heat waves will affect the well-being of city dwellers. The difficulty of cooling the home when the number of nights with temperatures above 26 degrees will more than double. Depending on the current climate measures, these episodes will be more or less severe and recurrent, but the climate will change while the buildings remain in the same place.

The scenario analyses mentioned above always emphasize that demographic as well as climatic forecasts are not set in stone, but that political measures taken by countries and cities today can influence the course and outcomes.⁶ The role of an architect is both to aim to influence the evolution of society and also to have their building functioning whatever future evolution of society. In this master's thesis, you would first have to propose what Zurich might look like in the year 2121. You collect data and forecast some developments regarding the needs of the population, the availability of materials and the climatic conditions. From this you will derive your vision. In a second step, you will then propose a design that, if built in 2021, would put Zurich on the path of the year 2121.

¹ <https://www.stadt-zuerich.ch/hbd/de/index/staedtebau/planung/richtplanung/kommunaler-richtplan.html>, accessed May 8, 2021. Unlike the federal government and the cantons, the statistical office of the city of Zurich calculates expected population growth based on residential construction activity (officially approved projects). Since the vacancy rate in the city of Zurich is virtually zero, this calculation allows for a more accurate forecast.

² <https://www.viz.bfs.admin.ch/assets/01/ga-01.03.01/de/index.html>, accessed May 8, 2021.

³ In Japan, 28 percent of the population was 65 and older in 2019.

<https://de.statista.com/statistik/daten/studie/165976/umfrage/altersstruktur-in-japan/>. Retrieved May 8, 2021

⁴ Stein Emil Vollset, Emily Goren, Chun-Wei Yuan, Jackie Cao, Amanda E Smith, Thomas Hsiao, et al., "[Fertility, mortality, migration, and population scenarios for 195 countries and territories from 2017 to 2100](#)," in: *The Lancet*, Volume 396, ISSUE 10258, October 17, 2020, pp. 1285-1306, here p. 1291.

⁵ <https://www.nccs.admin.ch/nccs/de/home/klimawandel-und-auswirkungen/schweizer-klimaszenarien.html>, accessed May 8, 2021

⁶ Jared Diamond, *Collapse. How societies choose to fail or survive*, London 2011.

Work to be done in preparation phase

- Individual work
- Inputs via lectures, visits, literature review, and interviews
- Weekly meetings with Guillaume Habert during the first weeks of the semester
- Biweekly meetings with Guillaume Habert and Elli Mosayebi

Outcome preparation phase

- A report (PDF presentation on data and analyses)
- A miniature on 2121 Zurich (drawing and narrative)

Ratio of grading by cooperation partners for preparation and elaboration phase:**Preparation phase:**

- Percentage designer: 50%
- Percentage non-designer: 50%

Elaboration phase:

- Percentage designer: 70%
- Percentage non-designer: 30%