The starting point for my graduation project was an interest in iconic architectural projects that experience financial failure during construction, in order to better understand the architect's role in the process, and to imagine an alternative scenario for such projects that would allow them to be completed. Early on, in order to make my research more specific and to allow my project to evolve into a design, I was interested in analysing the Elbphilharmonie project in Hamburg, designed by Herzog & de Meuron, which is currently under construction. By getting into the social, political and technical details of the project, I was able to understand the reasons which led to its current status of being significantly over-budget (costs escalating from a predicted 77 million euros to the current estimate of 800 million), and 5 years behind schedule. My goal in undertaking this research was to come up with a general design approach for projects of this nature, that could be implemented in the future to help avoid failure.

My first area of research was to understand what is meant by an Architectural Icon, and the effect that one might have on a city. I looked at the example of the Guggenheim Museum in Bilbao, and was then better able to understand the aspirations of Hamburg in deciding to build Elbphilharmonie, in the hope that it would also have the same economic and cultural impact. However, it soon became clear that perhaps the ‘Bilbao Effect’ could better be termed as the ‘Bilbao Anomaly’, because the iconic chemistry between the design of a building, its image and the public turn out is somewhat mysterious, and for every Guggenheim, there are many iconic failures, of which Elbphilharmonie could become one. The unconventional architecture of Herzog & de Meuron that Hamburg hopes would draw global tourists to their city is not guaranteed to be a success, and might just be bankrupting its citizens without bringing them any significant benefits.

By analyzing what elements of Elbphilharmonie’s design make it ‘Iconic’, and the relevance of each given the cost-increases, I was able to understand the benefits of the building for the city’s image on a global scale in contrast to the benefits for its individual citizens. Initially, the three elements of the design that were expected to make the project a Global Icon were, 1) its prominent site, on top of a listed warehouse at the very heart of Hamburg that would give tourists a panoramic view of the harbour, 2) its unusual iceberg shape that seems to float above the old building and can be noticed from many points in the city and as one approaches by boat or by train, and 3) the world-class concert hall function, that would put the city on the map as a destination for enthusiasts of classical music. I concluded that other elements in the design were of secondary importance, and would not contribute to Elbphilharmonie’s iconic status, such as the expensive curved glass panels of the façade, the long escalator that goes up five storeys straight from the street to the public plaza, and the commercial functions (a hotel and luxury apartments) that were initially expected to make the design cost-neutral, but given the project’s tenfold cost-increase have now been rendered irrelevant and a subject of ridicule for the citizens of Hamburg.

These conclusions were a starting point for my re-design. Seeing as the Elbphilharmonie project has gone tenfold overbudget, my primary intention was to reduce construction costs while still retaining the three elements that made the initial design a ‘would-be Global Icon’. At the same time, seeing as the citizens of Hamburg are paying for 90% of construction, the building has to be considered a Local Icon by them, which would involve a significant re-programming to give it...
a more public nature. By retaining the building’s basic shape and concert hall function, my
design would still remain loyal to Herzog & de Meuron’s vision, and by replacing the redundant
commercial functions with cultural functions that could benefit the citizens of Hamburg, I am at
the same time creating a public building that will evolve over time to become a ‘Local Icon’. My
research looked at the Rota Flora building in Hamburg, that has evolved over decades to become
a Local Icon and integrated itself into its community, and political and music scenes. The
building is seen as such an vital part of the neighbourhood’s life and image that at the end of
2014, violent protest broke out to stop evictions from the building. I can imaging drawing
parallels between the Rota Flora and my vision for Elbphilharmonie, that could also become a
community building where its users have more control over how it is used and how it evolves to
become an integral part of the community and cultural scene.

I was interested in developing a new economic model for the Elbphilharmonie, that would make
my new design both economically and culturally feasible, and looked at various examples of
cultural districts and creative clusters, to understand alternative management structures that could
be used to help my Local Icon evolve over time. One such example was the WestergasFabrik in
Amsterdam, which has a top-down management structure and follows a development plan which
appoints new permanent and temporary tenants to the cluster with a clear vision of how the
district will evolve over time. I felt like this creation of a Collective Identity is also crucial for
my project, in order to ‘brand’ the Elbphilharmonie as a new cultural space within Hamburg, and
for it to be acknowledged as such by its citizens. My research trip to Hamburg provided me with
a good overview of the other cultural institutions in the city, so I could begin to understand what
my building could provide that is unique in its privileged location. By researching permanent and
temporary cultural activities that take place in the Hafencity district, I saw what uses I could
integrate into my new development plan. I thought it vital to provide space of both high and low
rent, and a mix of production and consumption spaces, to allow the building to be visited by a
range of publics and for activities to occur throughout the day.

In order to make my re-design significantly cheaper, I chose to rationalize the structure and make
it out of pre-cast concrete elements wherever possible, leaving the expensive concert hall to be
the only thing that is cast on-site. The new rational grid allowed my base structure to be made of
standardized elements that could then be easily infilled by a variety of functions, in line with an
Open Building philosophy. I retained the positions of the existing cores, but reduced their
footprints in order to save costs and to fit with my new grid. Fire-escape stairs, service shafts and
toilets are housed in these cores, whereas elevators are on the outside, supported by the grid
structure. The spacing of the pre-cast concrete decks create double height spaces, that can then
besubdivided by a steel structure to create intermediate floors wherever necessary. Keeping the
same shape of the original design, I have replaces the expensive glass façade with a lightweight
steel structure that supports ETFE cushions and encloses the rational concrete structure and
concert hall. The various environmental zones created within the warehouse and the new façade
allows for a flexible approach to heating and cooling, and innovative ideas about ventilation. By
designing wall elements that provide a varying degree of environmental enclosure, the different
climatic zones can be occupied with changing functions throughout the year, and allow a more
passive environmental approach in the building that reduces the need for additional heating and
cooling.