ELBPHILHARMONIE, HAMBURG
Proposed for €40 Million
Final costs at over €800 Million

What can we do?
1. Iconic Architecture
2. Elbphilharmonie & Hamburg
3. A Local Icon for the City
4. Re-design
Building a new icon for the city

Sydney Opera House  
Guggenheim Bilbao  
Elbphilharmonie Hamburg
In its first three years, almost 4 million tourists visited the museum, helping to generate about €500 million in economic activity. The regional council estimated that the money visitors spent on hotels, restaurants, shops and transport allowed it to collect €100 million in taxes, which more than paid for the building cost.

“Somebody told me that that building helped to change the political climate in the Basque country. They wanted me to do the same for their country!”

- Frank Gehry
What is an icon?

**Icon**: a person or thing regarded as a representative symbol or as worthy of veneration.

**Architectural Icon**: a building which is unique or “one of a kind” and also strongly representative of a place, acting as symbol by which a place is remembered.
The Architectural Icon is the building equivalent of the Niagra Falls or the Grand Canyon: a place you must visit at least once in your lifetime.

The Pyramids ‘are’ Egypt

The Eiffel Tower ‘is’ Paris

Big Ben ‘is’ London
**Success & Failure of Modern Architectural Icons**

Perhaps the ‘Bilbao Effect’ should be called the ‘Bilbao Anomaly’?

The iconic chemistry between the design of building, its image and the public turns out to be rather rare - and somewhat mysterious.

The example of Bilbao seems to teach us that unconventional architecture is a prerequisite for iconic status. So clients have encouraged their architects to go to greater and greater lengths to design buildings that are unusual, surprising, even shocking.

But for every Guggenheim, there are scores of costly iconic failures. And the problem is that they don’t go away.
HAMBURG, GERMANY
ELBPHILHARMONIE - The Vision
Elbphilharmonie


**Energiesysteme**
Ziel Nutzung der Sonnenenergie ist das Haus mit einer Photovoltaikanlage ausgestattet. Elbwasser wird durch ein Rohrleitungssystem geführt und kühlts das Haus.

**Glassaal**
Die 16.800 m² große Glashalle besteht aus 235 m x 33,5 m großen Einzelscheiben, die teilweise gebogen sind und so Licht erzeugen. Das dreiteilige, hohe Glasgebäude hat eine Wärmedämmung und 30 Prozent der Energie aus dem Haus.

**Konzertsaal**
Der 50 m lange, 40 m breite und 25 m hohe Große Saal bietet das Herzstück des gesamten Gebäudes. Zwei ineinanderliegende, nur durch Stauden und Pflanzen getrennte Räume garantieren abschließende Bereiche und ermöglichen die Verteilung der Lichtefekte. Der Boden ist mit Holz geführt, befindet sich in der Mitte des Raumes. Hier wird ein komplettes Orchester zu einer Orchesterwerktätigkeit gestillt.

**Wohnungen**
45 Wohnungen zwischen 100 und 300 m²

**Plaza**
Auf der nach allen Seiten offenen Plaza können die Besucher von der Aussichtsplattform der Foyer auf die Stadt und die Innenstadt Hamburg genauso gut die Architektur der Konzertsaal und dem Ticketing Philharmonie sehen.

**Hotel**
247 Zimmer

**Backstage**
Musikpädagogischer Bereich

**Eingang- und Treppenbereiche**

**Stellte Stelle**
<1111 Bettenplätze im Randbereich. Das vierteckige Tor wurde auf das 1111 Bettenplätze im Randbereich umgestellt. Das vierteckige Tor wurde auf das 1111 Bettenplätze im Randbereich umgestellt.
What makes the Elbphilharmonie an Icon?

- The Old Building?
- The Archives?
- The Form?
- The Main Function?
- The Public Space?
- The Facade?
- The Entrance Route?
- The Commercial Spaces?
- The Parking Spaces?
Financial Model - Global Icon

- Concert Hall: €224 million
- Hotel: €195 million
- Apartments: €90 million
- Public Plaza: €70 million
- Restaurant: €21 million
- Car-Park: €53 million

City of Hamburg

Return on Investment

Public Investment: €800 million

Concerts

Tourism

“Iconic Status”

Public Plaza

Restaurant

Hotel

Apartments

Car-Park
Sydney Opera House Planning Disaster

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<tr>
<th>Date of Estimate</th>
<th>Estimated Cost ($A million)</th>
<th>Estimated Completion Date</th>
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<td>January 1957</td>
<td>7.20</td>
<td>January 1963</td>
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“The thing we wanted built was Utzon’s Opera House, not some botch up of it. And that Opera House costs that amount of money - approximately - and would from the beginning have cost that amount of money, only nobody knew it then ... if these facts had been known to begin with, the Opera House would probably never have been built. And the fact that it wasn’t known, and that clients and public were completely misled by the first so-called estimate, was one of the unusual circumstances that made this miracle possible.”

- Ove Arup
The people of Hamburg see Elbphilharmonie as a symbol of capitalist urban policy.
Re-design Problem Statement:

- The magnitude of the costs of the Elbphilharmonie can only be justified if the building does become a Global Icon.

- As 90% of the costs are paid for by the people of Hamburg, the project must get more public functions and become accessible to all groups of Hamburgers (rather than simply the elite and tourists).

- It is therefore important to understand what should be changed to reduce construction costs, and guarantee that the building become both a Global and a Local Icon.
Local Icon:
a building that has a special significance to a community, because of its history or character that might go unnoticed by others from outside of that community. Often the icon has gone through a long process of development in response to the specific need of that community.
ELBPHILHARMONIE: A NEW LOCAL ICON FOR HAMBURG?
‘ELBPHILHARMONIE CULTURAL CENTRE’
New Project Organisation & Program
Adding Local Functions
New Public/Private Relationship
New Program Distribution

Global Icon

Local Icon
New Financial Model

Global Icon

City of Hamburg
Concert Hall
“Iconic Status”
Public Plaza
Restaurant
Hotel
Apartments
Car-Park

Public Investment €800 million
Return on Investment
Concerts
Tourism

Local Icon

City of Hamburg
Concert Hall
“Iconic Status”
Public Spaces?
Conservatory?
Cultural Centre?
Library?
Cafe?
Bar?
Restaurant?
Hotel?
Apartments?
Car-Park?

Public Investment €400 million?
Return on Investment?
Concerts
Tourism
Local Value?

Global Icon Local Icon
A Public Infrastructure

One Level of Public Space

Three Levels of Public Space
ZONE 1
1. Performance/Market
2. Ferry Terminal
3. Café

ZONE 2
4. Public Living Room
5. Cultural Centre
   - Performing Arts Centre
   - Gallery
   - Ateliers

ZONE 3
6. Plaza
7. Restaurant

ZONE 4
8. Conservatory/
   Vertical Garden
9. Concert Hall

ZONE 5
10. Roof Garden
11. Library
12. Bar
Rationalisation of Structure
New Rational Grid

C1  C2

10.0m  8.6m  3.3m
Ground Floor Old/New Plans
Open Structure
Pre-fabricated vs. Cast-on-site Structure

- Pre-cast Rational Structure
- Load-Redistributing Technical Level
- Cast-on-site Irrational Structure
New Facade Concept - ETFE Tent Structure

Curved glass facade panels

ETFE tent structure
New Facade Concept - Replicating Existing Design's Elevation
New Facade Concept - Alignment of Tent Poles to the Grid
**Design References**

**Environmental & Infil Concepts**

**Lacaton & Vassal**  
Architecture School in Nantes, France

**Arno Brandlhuber**  
Antivilla in Krampnitz, Germany
Infil Concept
Secondary Steel Structure & Environmental Enclosure
Infil Concept
Environmental Detailing
Environment

Winter

Warehouse: Cafe/Performances stop, and move upstairs

Greenhouse: Above freezing, plants can grow, semi-inhabitable

Summer

Warehouse: Warehouse is a performance venue, fully inhabitable.

Greenhouse: Inhabitable with blinds and ventilation from Warehouse.

Spring/Autumn

Warehouse: Radiant heat sources in Cafe and Performance spaces.

Greenhouse: Inhabitable/Comfortable
1. Performance/Market
2. Ferry Terminal
3. Café
4. Public Living Room
5. Cultural Centre
   - Performing Arts Centre
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ZONE 2
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