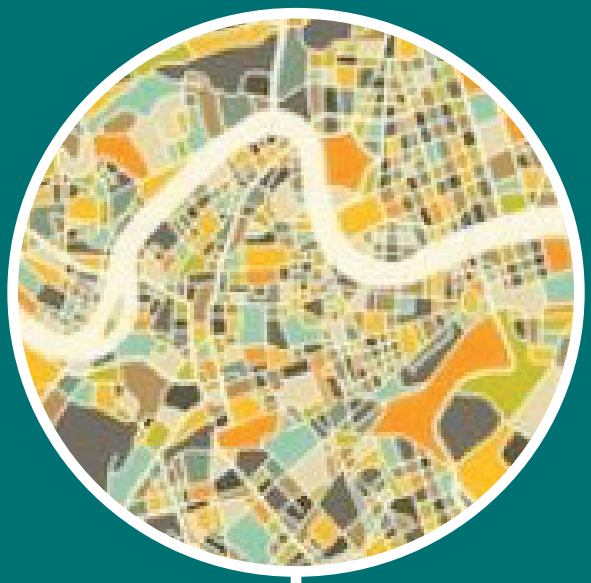
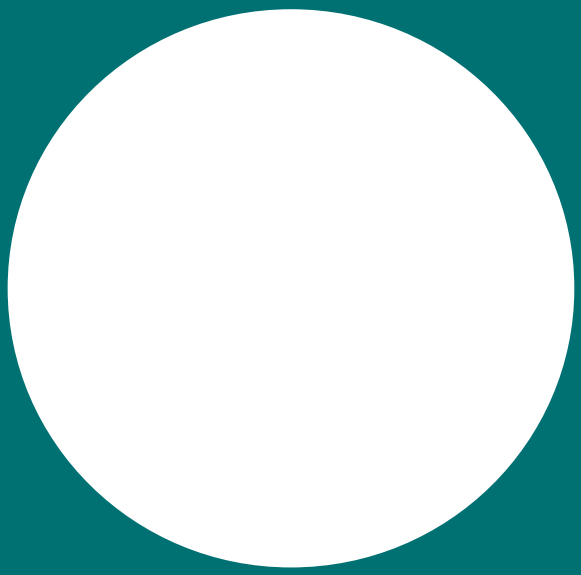


01

history of collaboration



index

There is one similarity between architects and engineers. The interest to see something evolve. From an idea to a product – a building.

In the University of Applied Sciences Bremen you can choose:
Architecture or Civil Engineering?
B.A. or B.Sc?

From the idea of the owner to the first sketch, creating an image? Or a theoretic point of view.
Making the image possible: how can we build that?

Chose, but chose one.

In the module Interdisciplinary design we wanted to break through this boundaries of working in just one direction.
Going-to-be architects and going-to-be engineers came together to see what will happen if those disciplines clash.

prejudices

ABOUT ARCHITECTS

more women then men

wearing glasses and black turtleneck

bad timemanagement

working with complex forms far away from reality

never satisfied, rethink an idea over and over again

lose themselves in their imagination

like engineers, but dont understand maths

dont care about structural problems

prejudices

ABOUT ENGINEERS

more men then women

structural/ civil / math

no sende for aestethics

work straight forward

think they are more important than architects

are all jerks

dont take women in their job serious

stoneage

9000 BC - 500 BC

nomades are developing to farmer cause of the need to settle down. in this period of time the first villages, as like we know, were built. they developed premanufactured components for easy built up and change places.

antiquity

500 BC - 500 AC

Their is a strong leaning forwards in development of western culture in science, art, literature, philosophy and politics. It is calles the mathematics and geometry empire typical buildings are meeting places like temples and tombs. For this artistic claim a stonemasonry is required.

middle age

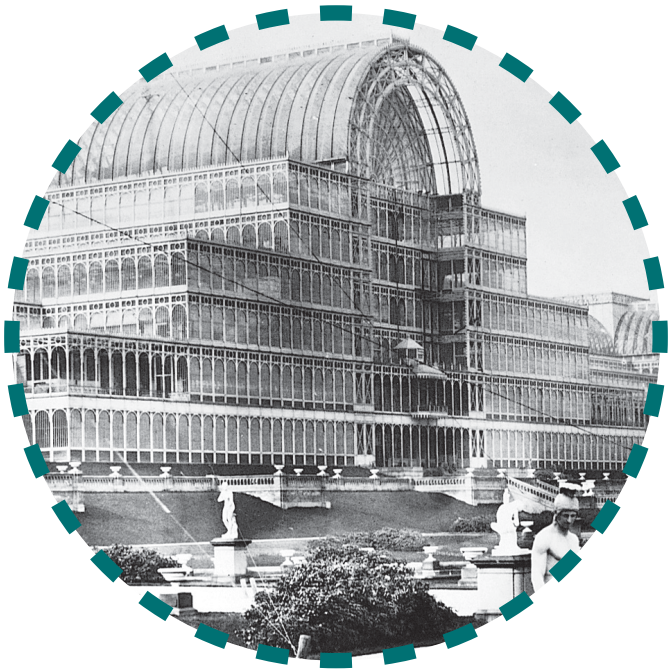
6th - 15th century

we talk about the theocentric worldview. everything is influenced by the christianity. the masterbuilder has his focus on stone-masonry. he was responsible for the buildings like very lavish cathedrals.

renaissance

15th - 17th century

now we have an antrophocentric world view. education is a social status symbol. the world starts being curious. a new type of masterbuilder came up which got especially trained at the first schools of architecture in history



industrialization

18th - 20th century

complex requirements for buildings and new materials like steel leads to asplit of the disciplines. architects and civil engineers are now separated.

begin 20th - middle 20th

since the 30s one master builder was responsible for the whole building process now a new material came up: reinforced concrete; which required a new structural language and on the other hand more complex possibilities for architectural designs. to handle this new development the disciplines separated, nevertheless collaboration should still be established on a system based on teamwork. this modern movement arrived first significant in Great Britain, especially relevant were Owen Williams, Ove Arup and Felix Samuely.


LE
MUSÉE
DES
IMAGES

high tech

20th century

architecture is turned
upside down Structure is on the
outside as well as the
inside, but with visual emphasis placed on the internal steel and/or concrete skeletal structure as opposed to exterior concrete walls. In buildings such as the pompidou centre, this idea of revealed struture is taken to the extreme. In this case, the use of „structural" steel is a stylistic or aesthetic matter.

modernity

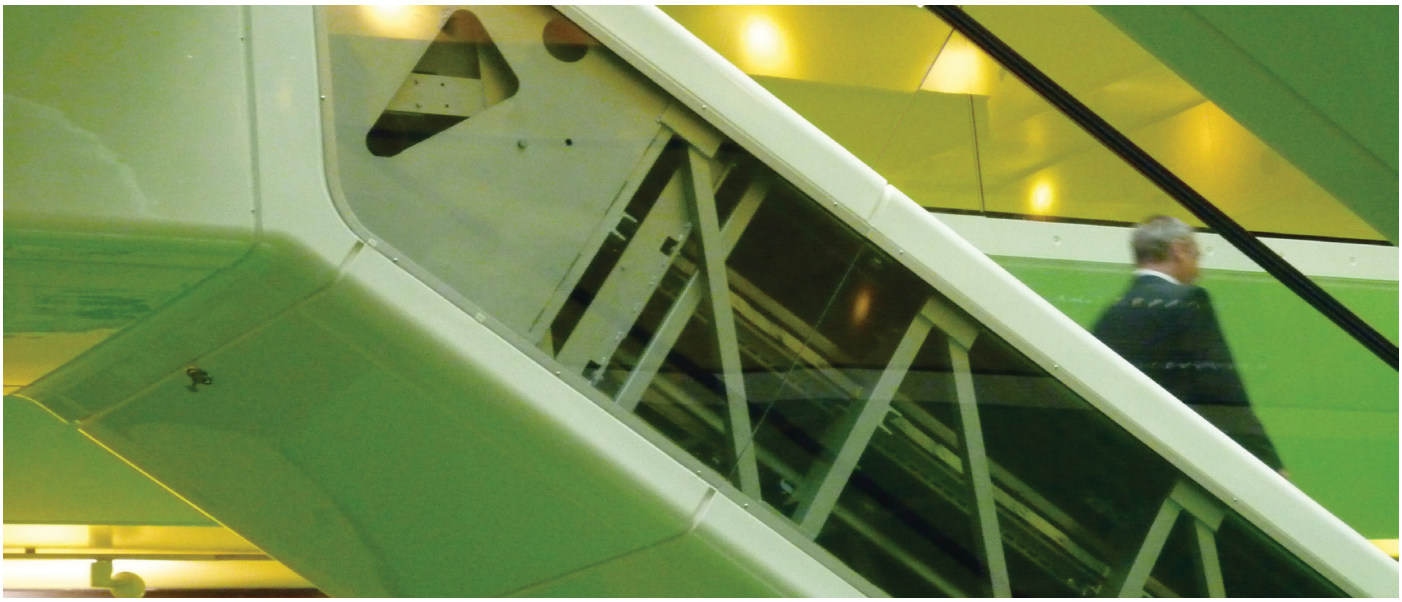
20th century - now

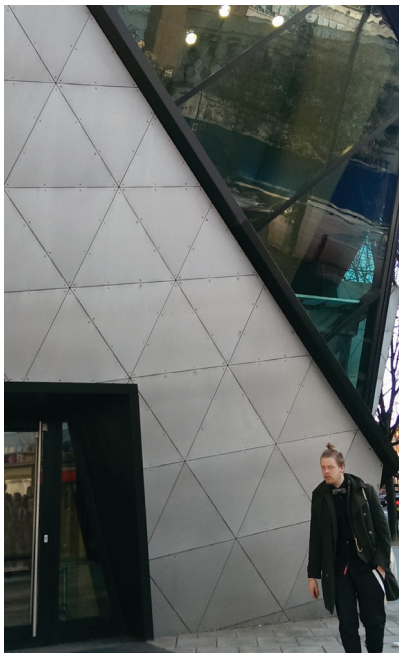
an example for great collaboration is the sydney opera House (1957-1973) where Arups idea of the total design came together. this means a corporation from sketch to the feasible project where communication during the construction process is an important part.

anthony hunt and norman foster are the best example of working collaboration. here a fictional conversation.

Foster: Hello Mr. Hunt. It was nice to hear that we are going to work together
Hunt: It is my pleasure
Foster: I have some great Ideas to make the wishes of the client coming true
Hunt: Alright, I know your work quit well, I am very excited what you have for me
Foster: I want to make something very innovative and new to make this project very special
First of all the ground plan. We haven't got so much space so I would suggest to use the available place and scale the building along the streets.
Hunt: Great idea. That should be no problem. We will build the slabs with reinforced concrete so we can have every form you want.
Foster: I like that Next is the facade. I think of a very big curtain wall, all around the building. So the outside the building should be just out of glass
Hunt: Okay I see. I think there is nothing comparable in Europe but I think we can manage that. We have to watch the wind loads but that is possible. Good idea. What else do you have?
Foster: My concept is to have big open space to create a good working condition for the employees so I don't want walls. They constrain too much.
Hunt: Yes I understand. But we have to think of something which bears the loads.
Foster: But no walls.
Hunt: Yes I got you. But the curtain wall is entirely non-structural. So.at least we need columns.I have to calculate the diameter

and the place. But I think they won't disturb the overall impression.
Foster: Small columns are okay, I can imagine that. This brings me a new idea of Le Corbusier's Five points of new architecture from the 30th,
Hunt: I heard of that. What do you mean exactly?
Foster: The five points are bear loading columns, free designed ground plan, a separated exterior from the interior so we have free choice for that with the horizontal windows and last but not least a roof garden. So we have the first 4 already. What do you think of a garden on the top?
Hunt: I think this would be a challenge but yes we can do that. It would be a good relaxing zone.
Foster: You are right. And it fits perfectly with my idea of a sandwich like building. We could have a roof garden and on top could be a pavilion of glass.
So the sun can shine in from almost all sides. Also through the roof along the free space in the middle where the escalators shall be.
Hunt: Okay but we need a construction on top. I think of a framework steel construction. That can be very light and will let a lot of light inside.
Foster: I like how you think Hunt. I am really looking forward of working with you. That is already a great start
Hunt: I am glad that I can make your visions possible. This kind of communication should be the way architects and engineers should work together. That is what I call COLLABORATION



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