

DEMOCRATIA

24.09.20 – 25.09.20

1st Democratia-Aqua-Technica conference



Developed world map which shows public spaces in each country that is next to a river, water front or a place that establishes a relation to a water site.

FOUR DIFFERENT PROJECTS HAVE BEEN DEVELOPED BY THE PARTICIPANTS:

AN ABSTRACT FOR NM NECKAR NOW summer school

ORGANIZED AND CARRIED OUT BY
PROF. DR. ULRIKE GAYH &
BELEN ZEVALLOS, SCHOOL OF ENGINEERING AND ARCHITECTURE

The School of Engineering and Architecture presented the first interdisciplinary Summer School "Neckar Now: Transformative approaches for a sustainable future" which took place from 16th until 21st of August 2020.

The Neckar Now Summer School addressed the potential and challenges of a city along the river from an engineering and architectural perspective. Heidelberg provides the perfect setting to learn about current trends and methods of sustainable innovation and design. Field trips, input sessions and expert feedback rounds gave the participants the ability to develop different approaches to local problems as well as to create their own projects in an immersive experience. An exciting one-week program for those considering future studies in Water Technology (M.Eng.) or Architecture (B.A. or M.A.).

Due to the actual Covid-19 Pandemic, this Neckar Now Summer School was carried out as Hybrid-Model. That means we had participants here in Heidelberg but also online.



DRAFT

NM NECKAR NOW Summer School Neckar Now: Transformative approaches for a sustainable future 16.08.20 - 21.08.20

DRAFT MEET(IN)G THE RIVER

JOÃO BANDEIRA, LUCAS CERQUEIRA, SAMIKSHA KOTTEWAR, AHMED ABDELRAHMAN, [ONLINE] VEDANT RAJPUT.

BIGGEST PUBLIC SPACE IN HEIDELBERG

The river Neckar now no longer divides the city into two parts but with Drafts we unite the people by morphing it into a meeting point.

Draft is a modular system that can be used for various purposes and is adaptable to the different schedules and daily routines of the citizens as well as for foreigners. These floating structures which can also be anchored at different points in the river we connect both the sides of river. Our project aims to provide a new urban structure supporting the existing one in education, culture and leisure spaces alongside the Neckar.

Analyses of the riverbank and mobility

In order to achieve this Drafts have to face some issues like the ship traffic on the river which makes of one of the city's main sources of income as well as the fragile eco-systems (fauna and flora) living in the river that can be harmed by the increased flux of people which may cause pollution or disruption in the natural balance generated there. To combat this type of challenges Draft is equipped with a system of solar generated power which fuels the floating structures and a cleaning and filtering system incorporated in the platforms that help reducing residual waste just by moving. This floating device has also the capability of retract whenever ships approaches to make easier their passage.

Diagrams of the modular system

FIND OUT MORE

Funded by the DAAD from funds of the Federal Foreign Office: **DAAD** Deutscher Akademischer Austauschdienst German Academic Exchange Service

DYNAMIC FLOOD CATCHER

NM NECKAR NOW Summer School Neckar Now: Transformative approaches for a sustainable future 16.08.20 - 21.08.20

DYNAMIC FLOOD CATCHER

MOHAMMED ALMETWALLY, ADITI DAS, HELENA FIGUEROA, KWAKU KIBIKI, JOHN LUGONGO, SUPRIYA MOHAKAR, LUCIA MORALES, AJEESH NELLUKUNNEL, YOGESH KUMAR

Heidelberg is one of the most historical student cities in Europe, therefore looking for a solution to the flooding problem that takes place mostly in the Spring season must be a priority to all Heidelbergers.

Here we come up with a solution that is dynamic in nature, addressing this challenge in a not invasive way for the traditional old town and the Heidelberg's beautiful historical landscape.

The idea is to implement a structure of the riverbank that contains movable panels. As a result, this temporary panels avoid the water coming towards the city, and consequently, protecting it from floods.

The hydraulic mechanism lift up the barriers (panels) by using the water pressure created when the river increases its flow rate.

Some things that need to be considered in the future are: improvements in the engineering design, efficient selection of sustainable and resistant materials and identification of potential areas for implementation of other dynamic flood catchers.

The panels act as a multifunctional structure for the city. Besides of its protection purpose, its surfaces can be used for advertisements, tourist information or even for gardening projects.

SCAN ME!

Funded by the DAAD from funds of the Federal Foreign Office: **DAAD** Deutscher Akademischer Austauschdienst German Academic Exchange Service

MOVE & MÜLL

NM NECKAR NOW Summer School Neckar Now: Transformative approaches for a sustainable future 16.08.20 - 21.08.20

MOVE & MÜLL

JOHN IWUEKE, SHRADHA PAWAR, JULIANA MORAIS, CORRINA SOMERHOLTER, MARVIN LOTSCH, DANIELA CHIGUITO, DILAY GÜLERÜZ, JEMIMA ZITA, JOHN LUGONGO, OMKAR KIRAN WADIKAR, YINLIN ZHOU

LET'S PLAY MOVE & MÜLL

Games are becoming one of the most interesting ways of promoting environmental awareness. Our first game is called Move & Müll and it is a waste Separation game which uses intrinsic motivation to encourage environmental literacy. Move & Müll aims to change the future of gaming with a fun and exploratory mobile game that teaches people ecological sustainability. It offers the smartphone generation the opportunity to make conscious decisions about the environment and therefore to play this role in the real world.

SCAN QR CODE

SPHERIEARTH

Funded by the DAAD from funds of the Federal Foreign Office: **DAAD** Deutscher Akademischer Austauschdienst German Academic Exchange Service

NECKAR-PERLE

NM NECKAR NOW Summer School Neckar Now: Transformative approaches for a sustainable future 16.08.20 - 21.08.20

NECKAR-PERLE

INÊS PEREIRA, GIL MARTINS, THOMAS ROTH, NIKITESH SOMNATHE, ZHYU YAN, KENNEDY GERALDO, SINDI SHEHI, MEGI BUFI, JAMIMA ZITA APIAH, YIMENG TANG

In the center of the Neckar river is located an island with its rich fauna and flora. Pearl of the Neckar is a project that celebrates the beauty and preservation of its ecology.

It consists of building a floatable pathway around it creating an immersive experience with your senses and surroundings like you've never experienced before since this structure will follow the river natural waves as if you were walking on top of it.

This pathway creates a connection between the land, river, and island giving this area a whole new meaning and space.

The levitating pathway won't destroy any land and will keep the beaver's habitat. It will raise awareness of the animals that are living in this area which may have an impact on people's behavior.

It creates an opportunity to observe the behavior of the animals.

Because of its shape and materials it naturally fits into its environment.

It shows people a new spot of Heidelberg besides the main attractions.

People can stay at a silent spot apart the noisy roads.

FIND OUT MORE

Funded by the DAAD from funds of the Federal Foreign Office: **DAAD** Deutscher Akademischer Austauschdienst German Academic Exchange Service



HOCHSCHULE

SRH HEIDELBERG

DESIGN BY SCHULZ&SCHRAMM

Funded by the DAAD from funds of the Federal Foreign Office:

DAAD

Deutscher Akademischer Austauschdienst
German Academic Exchange Service

Federal Foreign Office