

Hackathon@Staalbouwdag 2025





Waarom een Hackathon?

- **Vanuit Bouwen met Staal:**

- Nieuwe technologieën in het ontwerpproces op de kaart zetten binnen de staalmarkt
 - Voor zowel **medewerkers** als **beslissers**
- **Meebewegen met de tijd:** inspelen op actuele thema's en innovaties
- **Jonge talenten enthousiasmeren** en verbinden aan de Staalbouwdag

- **Vanuit de deelnemers:**

- (Digitale) **soortgenoten ontmoeten** uit andere bedrijven
- **Samenwerken met de toppers** uit de industrie
- **Jezelf zichtbaar maken** binnen de markt
- **Inspiratie opdoen en leren van elkaar**

2019

2022

2023

2024



Hackathon@ Staalbouwdag: the case

Design the steel reinforcement for existing stadium located in the Netherlands. The steel structure must meet the minimum standard requirements. Both, the main bearing structure and the structural steel detail will be judged on efficiency, aesthetics and buildability.

Donor case: Brug de Tuist

Hackathon time planning

Task	Start	End	Responsible
Design the steel reinforcement	10:00	12:00	Team A
Design the steel reinforcement	12:00	14:00	Team B
Design the steel reinforcement	14:00	16:00	Team C
Design the steel reinforcement	16:00	18:00	Team D
Design the steel reinforcement	18:00	20:00	Team E
Design the steel reinforcement	20:00	22:00	Team F
Design the steel reinforcement	22:00	24:00	Team G
Design the steel reinforcement	24:00	26:00	Team H
Design the steel reinforcement	26:00	28:00	Team I
Design the steel reinforcement	28:00	30:00	Team J

Design loads

Load	Value	Unit
Dead load	1.0	kN/m²
Live load	2.0	kN/m²
Wind load	0.5	kN/m²
Snow load	0.2	kN/m²
Seismic load	0.1	kN/m²

Load combinations

Combination	Value	Unit
1.0 + 1.5 S + 1.5 W	2.75	kN/m²
1.0 + 1.5 S + 1.5 W + 1.5 E	3.75	kN/m²
1.0 + 1.5 S + 1.5 W + 1.5 E + 1.5 W	4.75	kN/m²
1.0 + 1.5 S + 1.5 W + 1.5 E + 1.5 W + 1.5 E	5.75	kN/m²

Transport dimensions: max 25 x 4 x 3 m

2000 seats

Scoreboard 50 km

Min clearance height

8 meter

Add unique feature

Design loads

Database

Hackathon@ Staalbouwdag: the case

Design a solution for the main stage. The solution needs to be a combination of steel and wood structure. The overall structure and the steel connections will be judged on efficiency, aesthetics, buildability and sustainability.

Donor case: Brug de Tuist

Hackathon schedule

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Hackathon @Staalbouwdag 2024

Pimp my high-rise!

Goal of today

Transform, renovate and add value to existing high-rise

Inspiration!

Almost 40 year old

72 meters high!

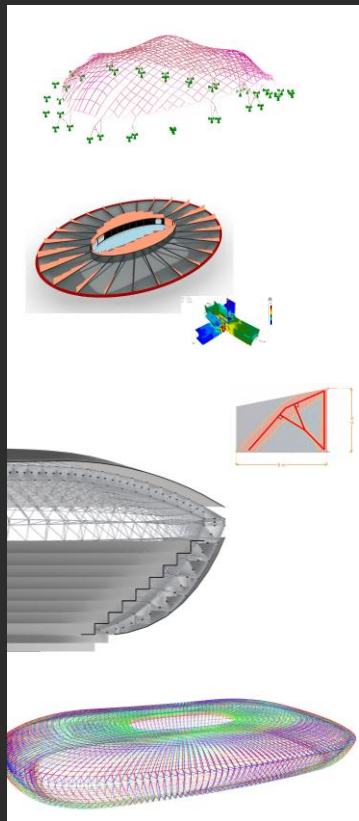
Booijze 200

Rotterdam

Evaluation Criteria

- Thinking out of the box
- Value
- Optimization
- Durability/Sustainability
- General interests (see Inside)

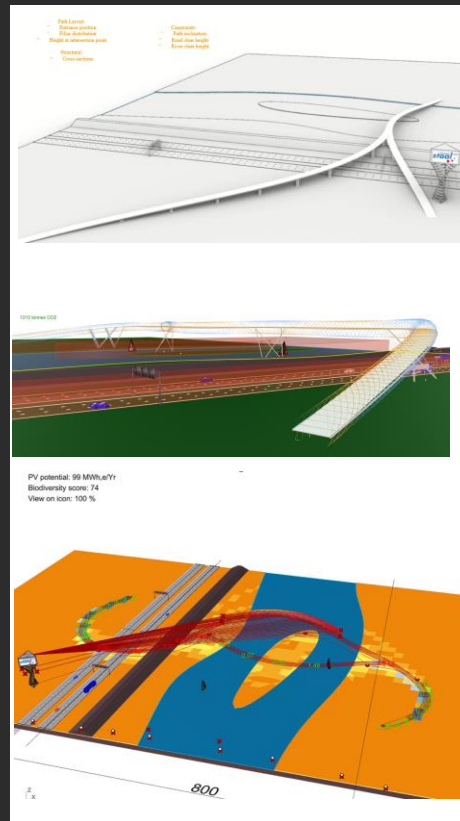
2019



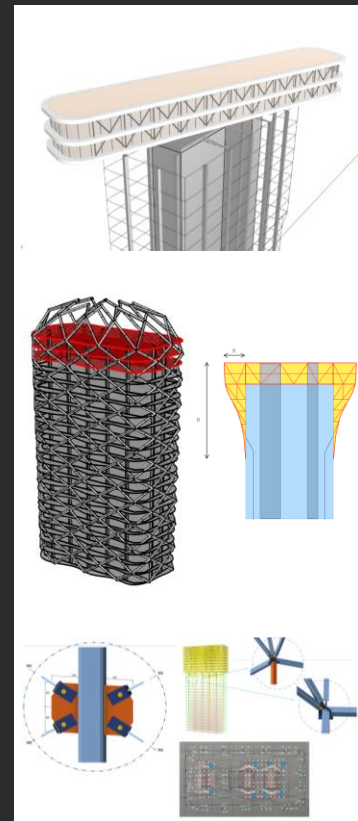
2022



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2024



Hackathon@Staalbouwdag 2025 Organisation committee



Luka Ekart – IV



Teun van Dooren – Kingspan Light + Air



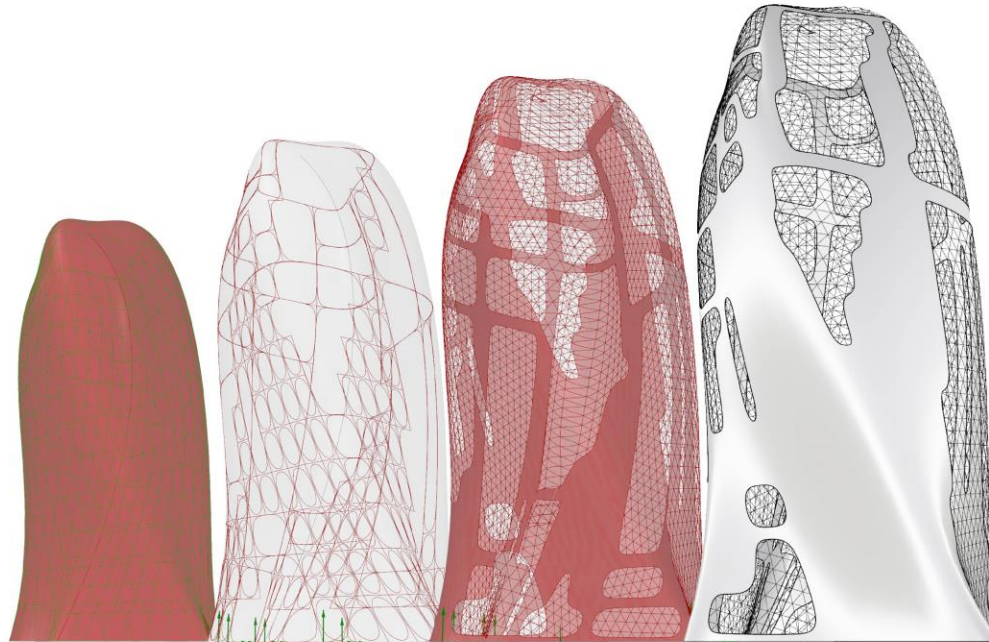
Tom Diks - BUCC

STAALBOUWDAG 2025

KARAMBA3D



Clemens Preisinger
Founder Karamba3D



Matthew Tam
Computational designer
Karamba3D

Hackathon@Staalbouwdag 2025 Jury members



Walter Spangenberg – (Former) ABT



Florentina Kavoura – TU Delft



Mike Tibolt – ArcelorMittal