



# Austrian Technologies for Hong Kong's Construction Industry

*Wednesday, 7th December 2022*

The Webinar will start at 3 PM HKT





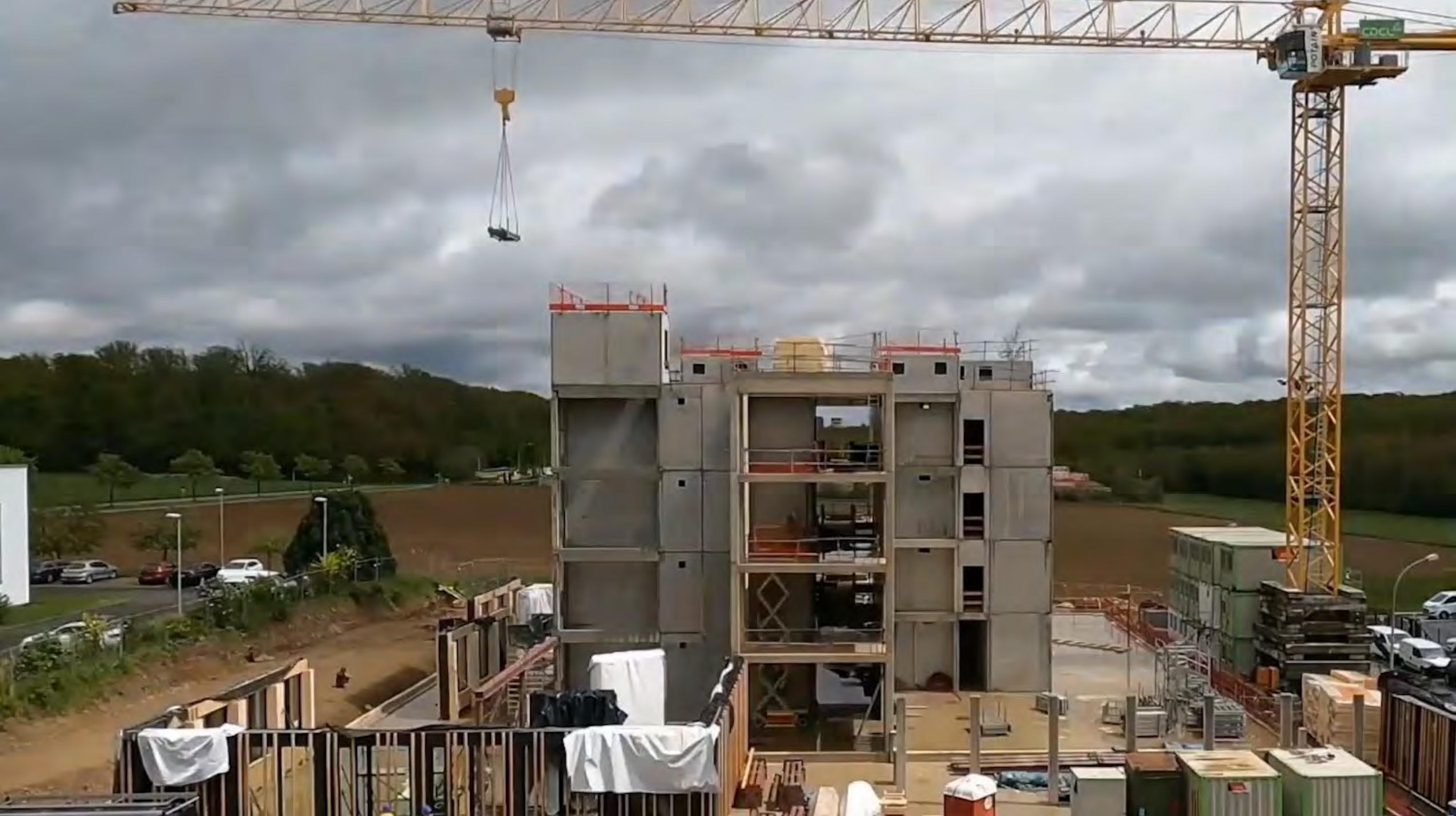
# ELIF ISTANBULLUGLU

ARCHITECTURAL CONSULTANT  
CREE BUILDINGS



The logo for CREE BUILDINGS is centered on a dark blue background. The word "CREE" is rendered in a stylized, bold, white font where the letters are interconnected. Below it, the word "BUILDINGS" is written in a clean, white, sans-serif font.

CREE  
BUILDINGS



Edge Südkreuz, Berlin



Illwerke Zentrum Montafon



UBC Gateway, Vancouver



Eunoia Junior College, Singapore



Victoria Park, Toronto



Siemens, Erlangen



# We are an international construction collective

*Utilizing local value chains  
With globally shared know-how*



Notifications

See more

Article reviews

227

Join requests

28

Drafts

107

See more



CAD Files: Start Modelling with CREE  
CREE Buildings



Structural Analysis  
CREE Buildings

Discover Qualified Partners

See more



CREE Buildings  
AT • Architecture / Engineering



CDCL  
LU • Construction Company



CREE Denmark  
DK • Construction Company



Partisans Architects  
CA • Architecture / Engineering



EFFEKT Architects  
DK • Architecture / Engineering



Published by CREE Buildings

CREE System: How to Choose the Right Project

Architect

May 06, 2021 • 8 min read

Featured Projects

See more >



Completed

Allégra

Leudelange, Esch-sur-Alzett...



Design

CREE Timber Tower

Castellón de la Plana,...



Completed

EDGE Suedkreuz Berlin

Berlin, Germany



Completed

Eunoia Junior College

Singapore, Singapore



Platform

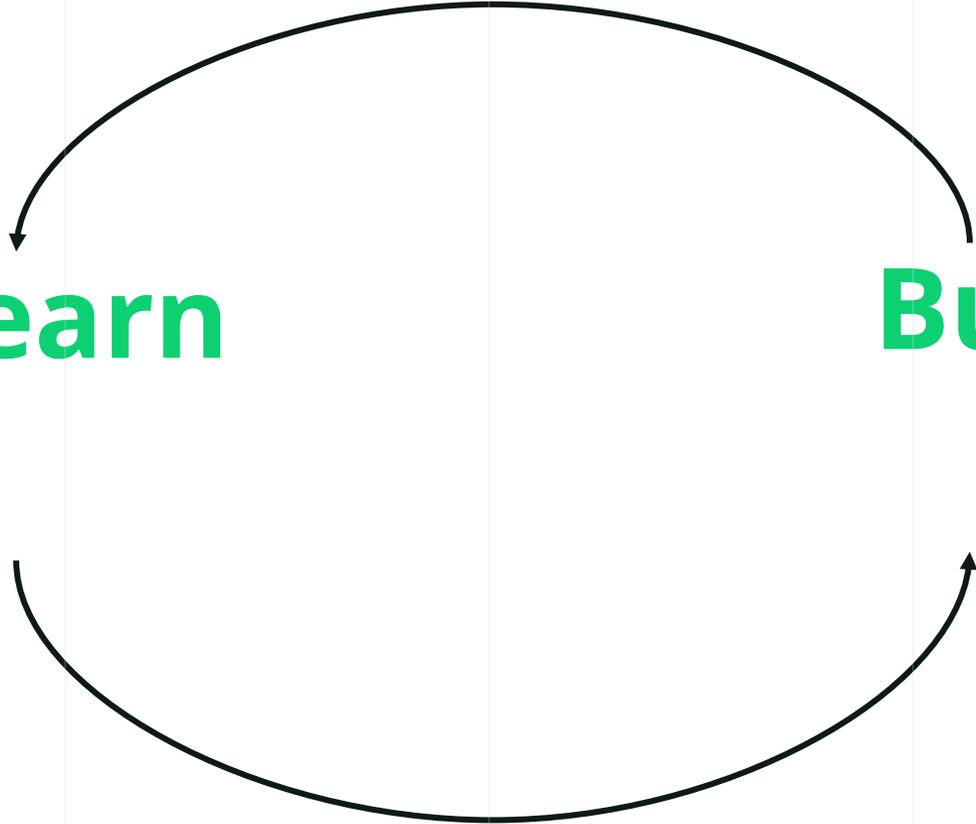


Give back  
**Collective**

**Learn**

**Build**

Connect  
**Collective**



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**THANK YOU.**

**Let's shape the  
future together.**





# PHYLLIS CHONG

BUSINESS DEVELOPMENT MANAGER (ASIA)  
RUBNER HOLZBAU

# RUBNER





**Better with wood**

**RUBNER**

TIMBER ENGINEERING

**GROW. BUILD.  
AMAZING.**

**7 December 2022**  
**Presentation for Austrian Technology Days**  
**Organised by Advantage Austria**



The RUBNER GROUP

# PASSION FOR WOOD SINCE 1926

A photograph of a modern building with a prominent wooden facade. The building features a long, covered walkway supported by vertical wooden posts. The sky is overcast with grey clouds. In the foreground, there is a green lawn and a wooden fence. The overall scene is bright and natural.

Our vision

**We build a greener world – by building with wood.**



# Wood Structure Products



# GLULAM

## SUSTAINABLE MATERIAL FOR BUILDING

Glulam is an engineered wood product comprising of multiple layers of finger jointed lamellas.

Ideal material for strong building structures that combine utility and aesthetics, coupled with high fire resistance.

High industrial product with modern computer numerical control (CNC) machinery and in-house construction of finished components.



# Production

## Location – Ober-Grafendorf (AT)



Annual Production (all): 85,000m<sup>3</sup> glulam, 250,000m<sup>2</sup> roof and wall elements

≈100,000 tonnes of reduced carbon out a year



# Production Finger Jointing Machine



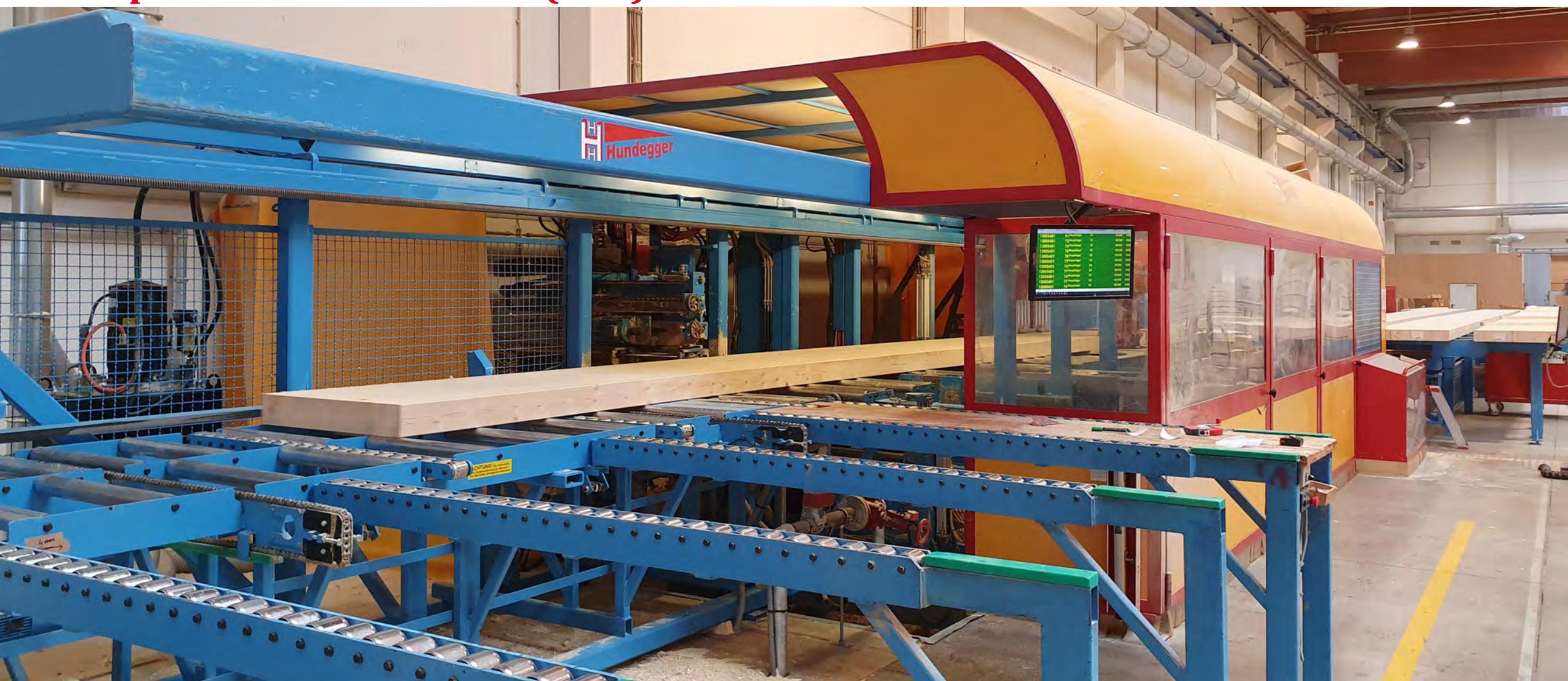


# Production Hydraulic Press





# Production Computer Numeric Control (CNC) Machine





# Rubner Iconic Construction Portfolio



# Mactan Cebu International Airport Philippines

**2018**

**ARCHITECT**

IDA – Integrated Design Association Ltd, Hong Kong (HK)

**CLIENT**

Konsortium GMR MEGAWIDE Cebu Airport Corporation,  
Philippines (PH)

**SCOPE OF SERVICE**

65,000 m<sup>2</sup> terminal area

4,500 m<sup>3</sup> glulam

800/1,270 mm main column

15 m arch height above finished floor

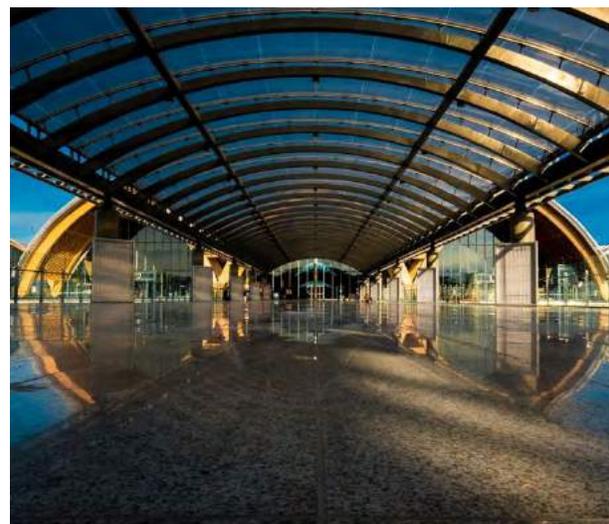
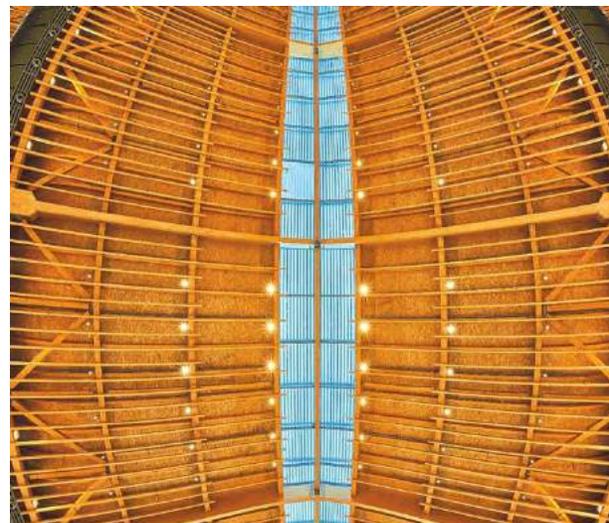
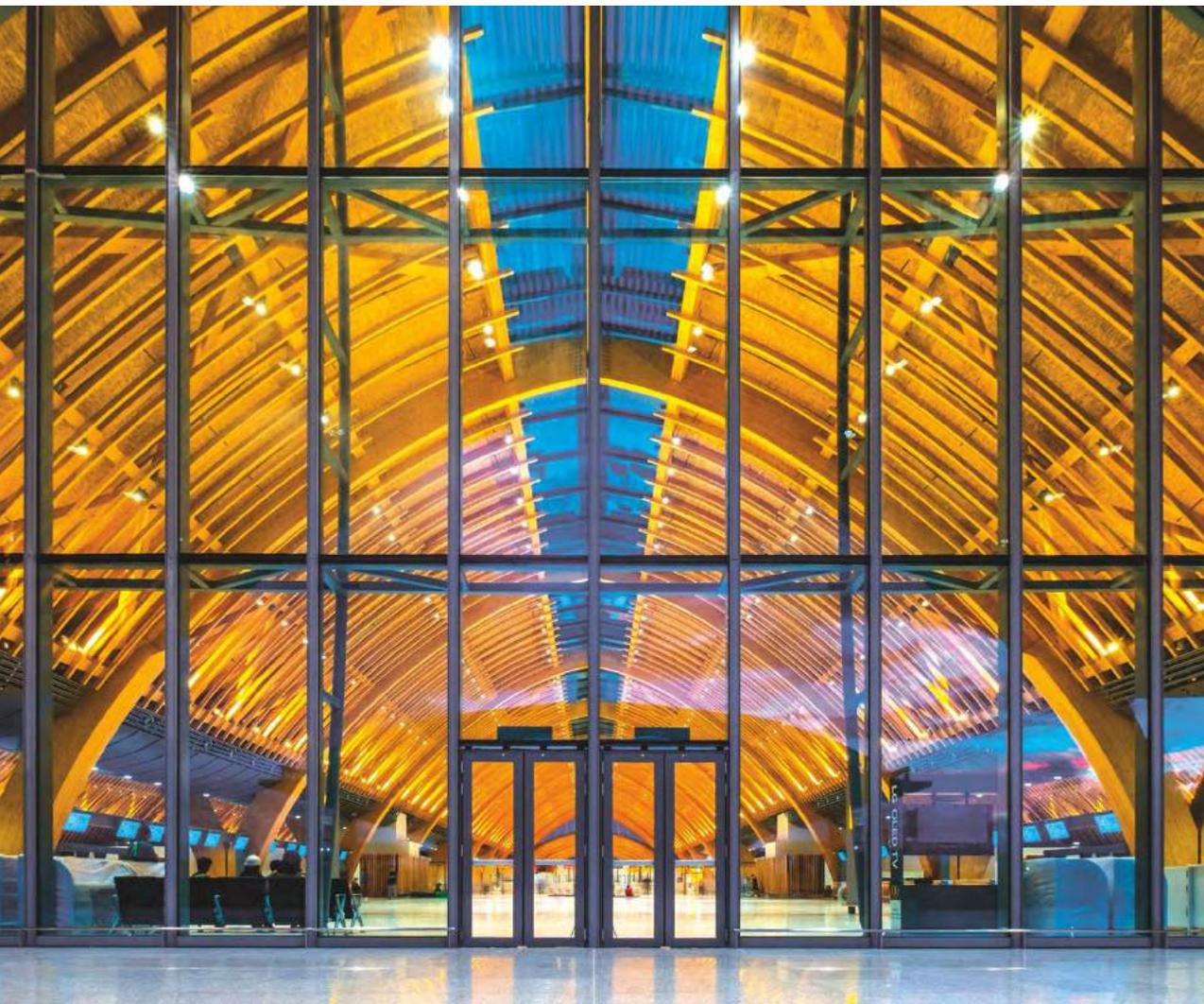
30 m span



# Mactan Cebu International Airport Philippines



# Mactan Cebu International Airport Philippines



# Mactan Cebu International Airport Philippines





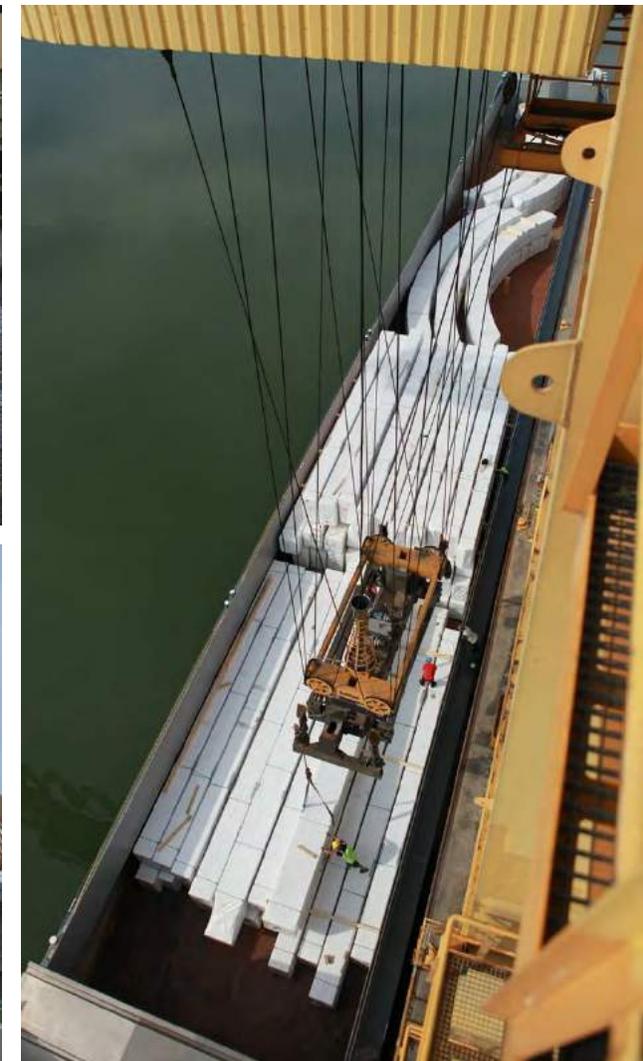
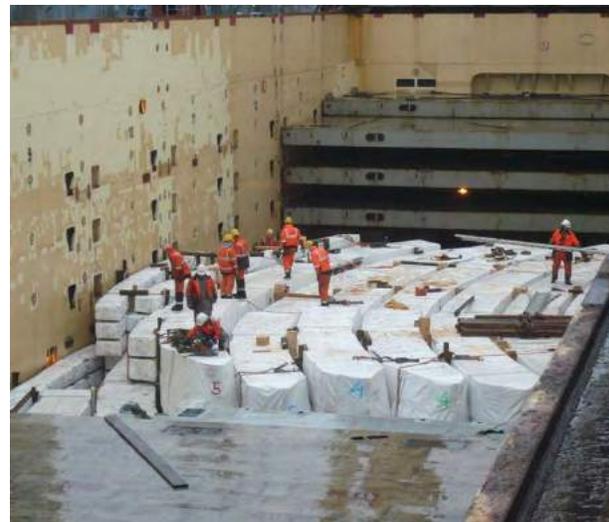
# Mactan Cebu International Airport Philippines





# Mactan Cebu International Airport Philippines

## Transport by water from Krems to Mactan Cebu





# BCA Academy Singapore

**Under Construction**

**ARCHITECT**

ADDP Architects LLP (SG)

**CLIENT**

Building Construction Authority (SG)

**SCOPE OF SERVICE**

1,700 m<sup>3</sup> glulam



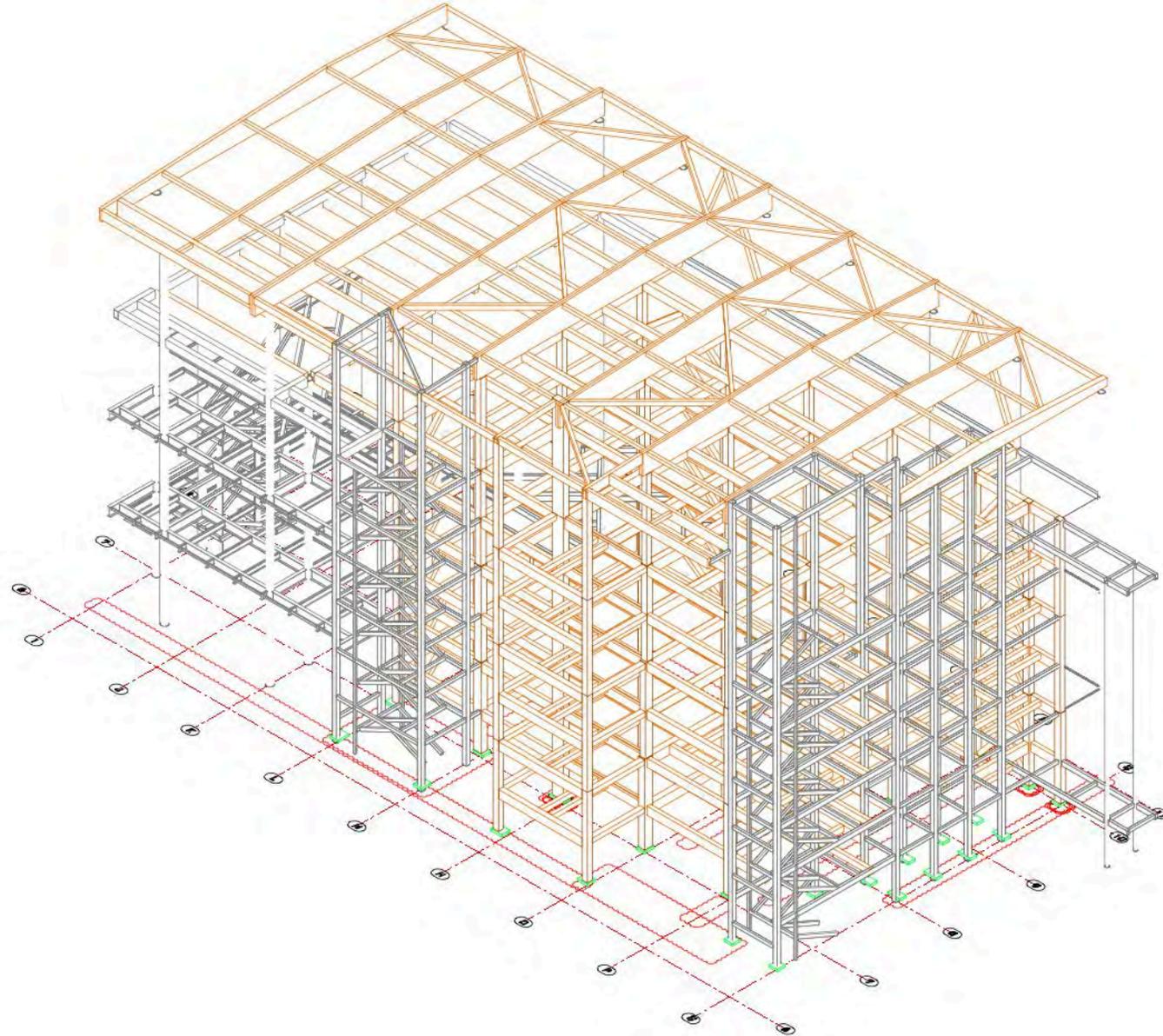
# BCA Academy Singapore





# BCA Academy Singapore







# Chadstone Link Melbourne Australia

**2019**

**ARCHITECT**

Make Architecture, London und Sydney (AUS)

**CLIENT**

Hickory Chadstone PTY LTD, Richmond (AUS)

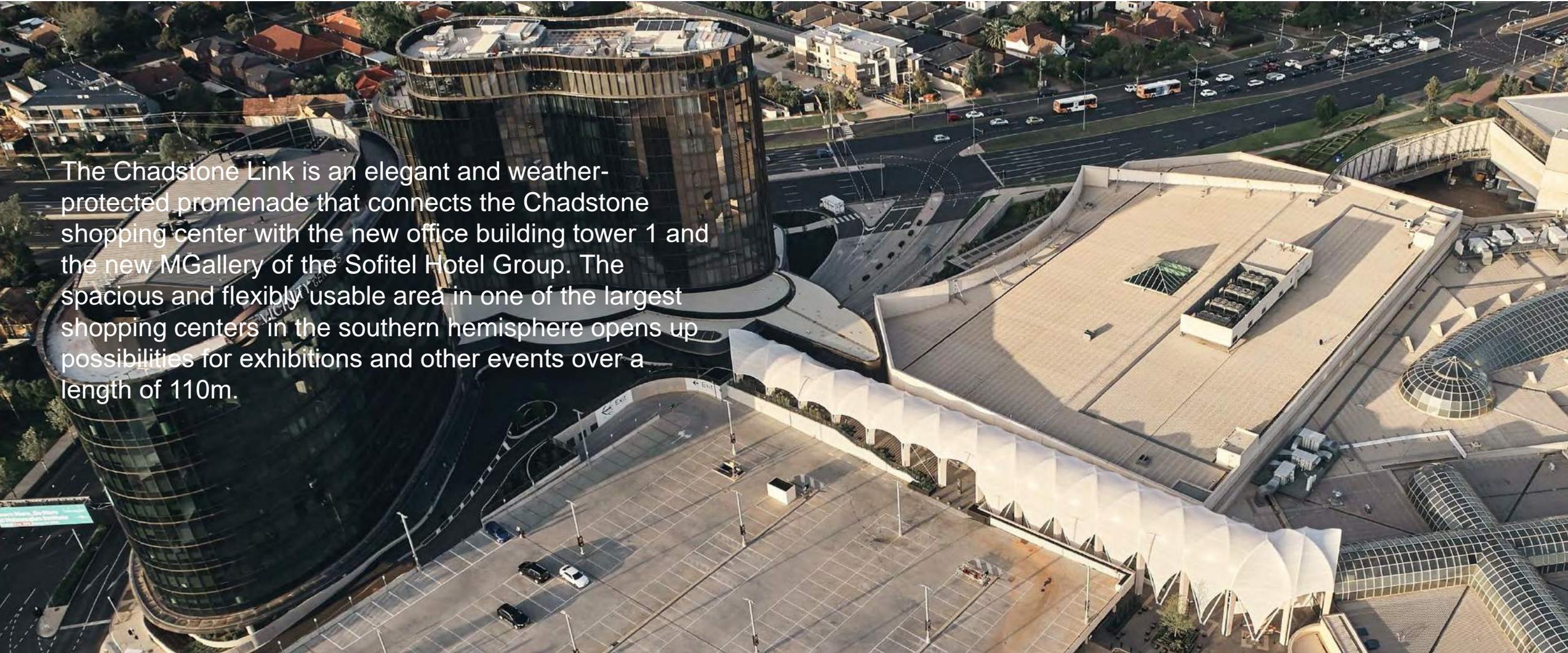
**SCOPE OF SERVICE**

200 m<sup>3</sup> glulam

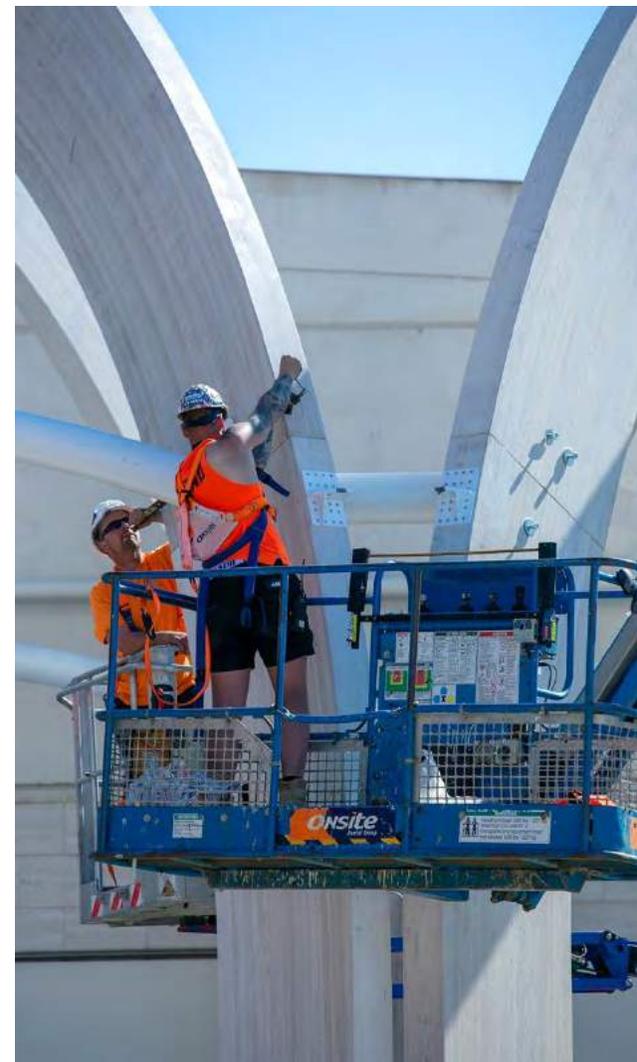
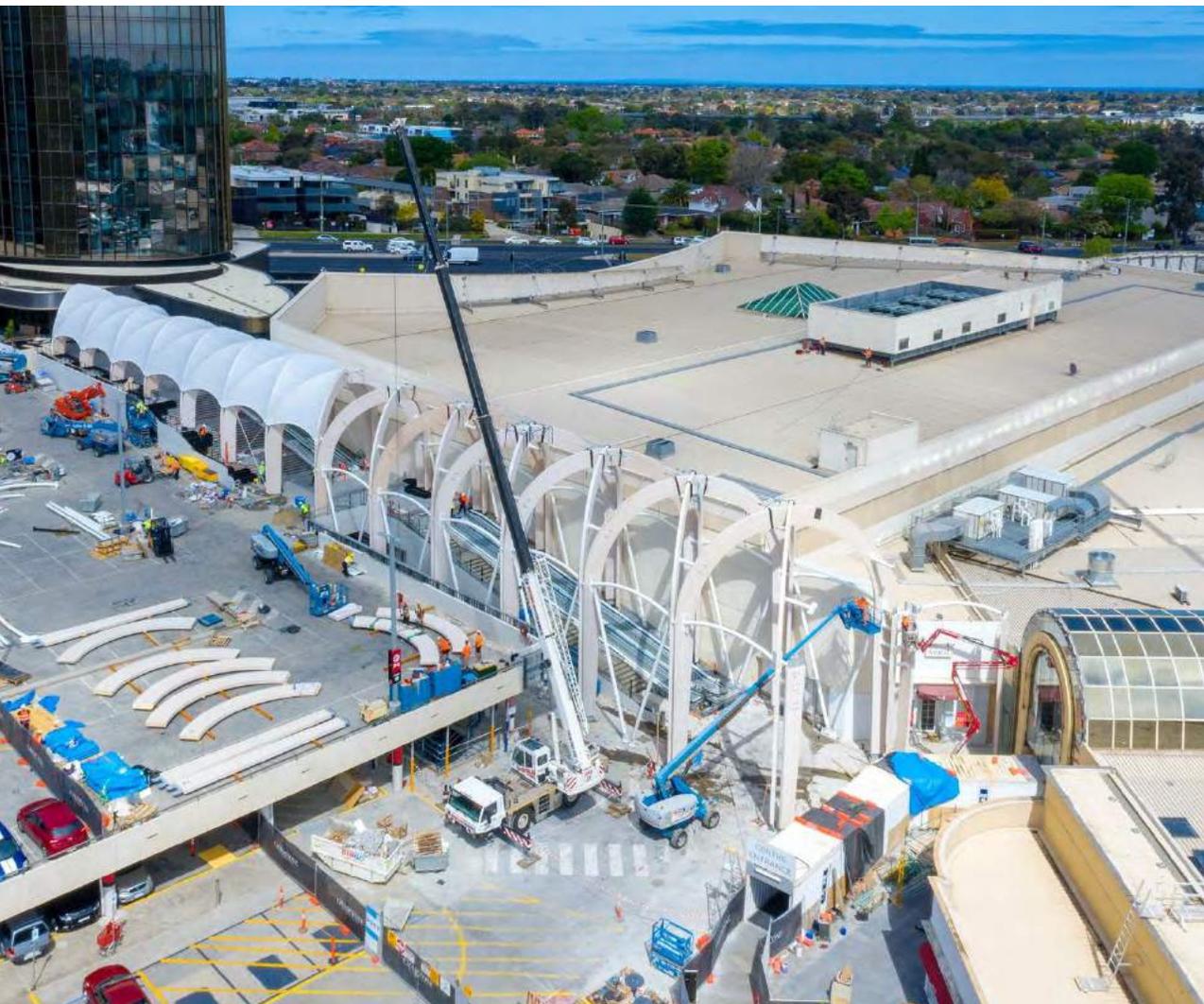
# Chadstone Link Melbourne Australia



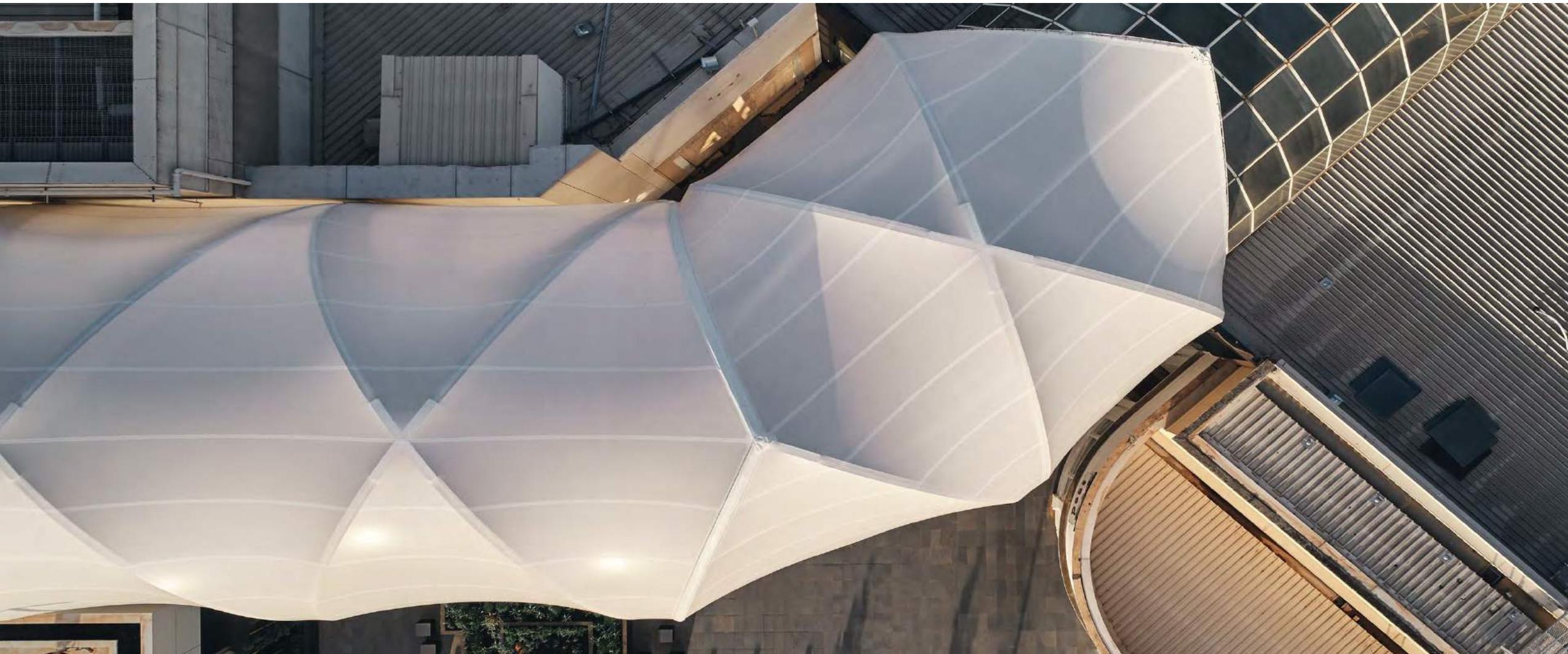
The Chadstone Link is an elegant and weather-protected promenade that connects the Chadstone shopping center with the new office building tower 1 and the new MGallery of the Sofitel Hotel Group. The spacious and flexibly usable area in one of the largest shopping centers in the southern hemisphere opens up possibilities for exhibitions and other events over a length of 110m.



# Chadstone Link Melbourne Australia



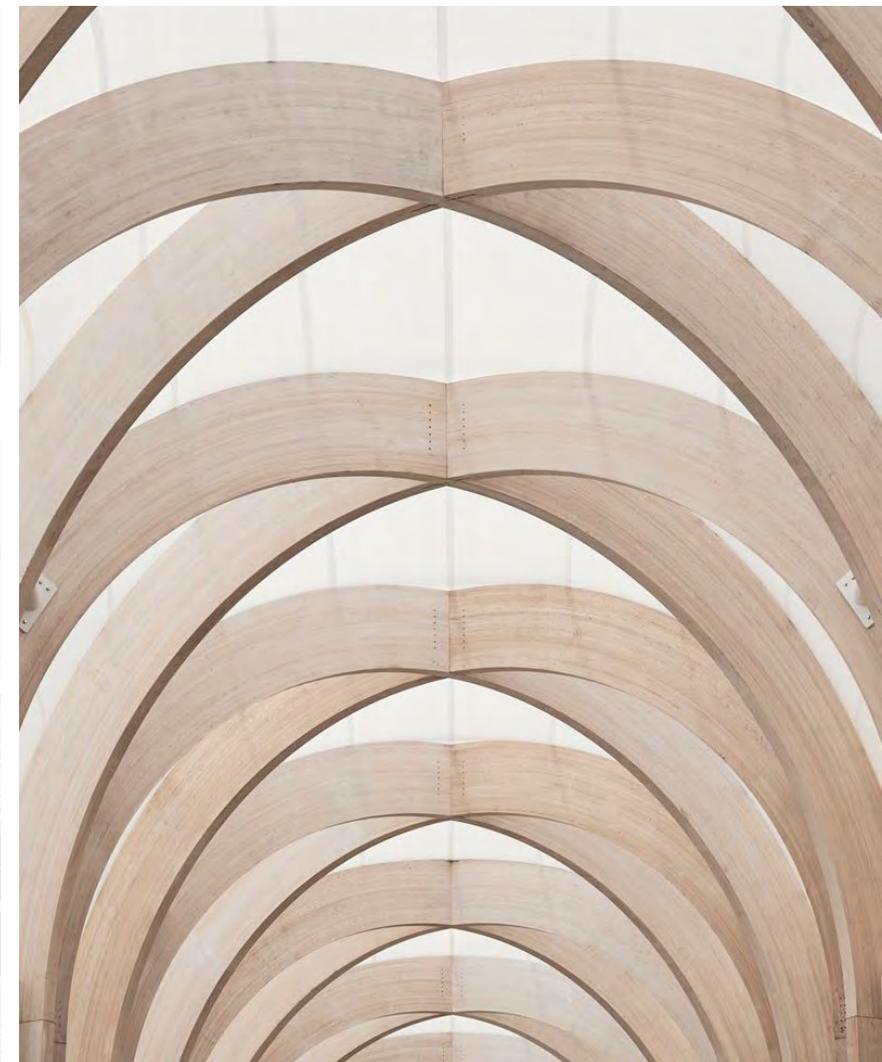
# Chadstone Link Melbourne Australia



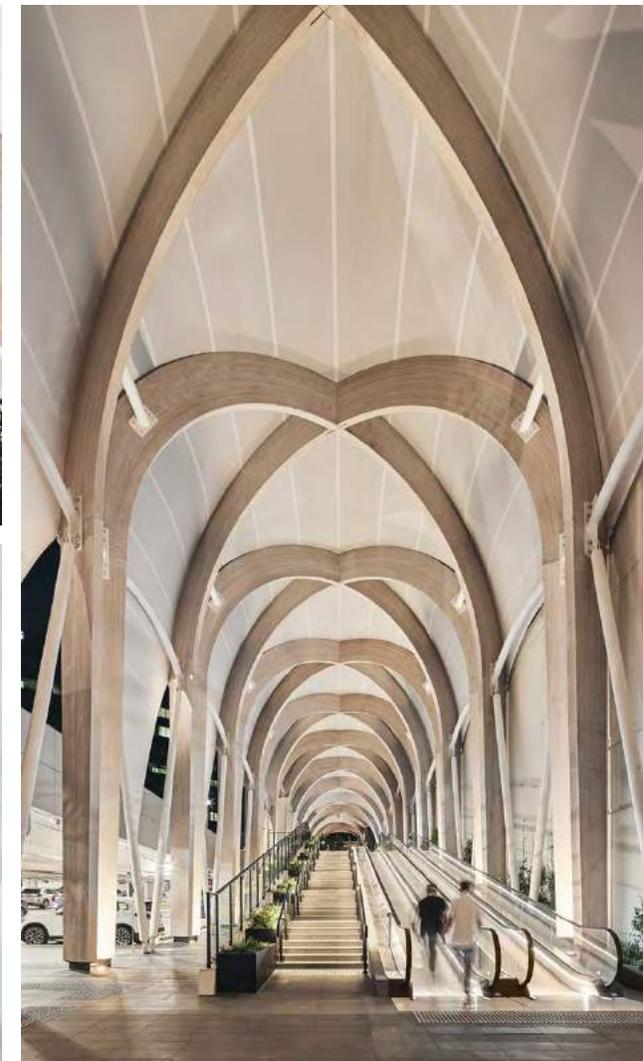
# Chadstone Link Melbourne Australia



# Chadstone Link Melbourne Australia



# Chadstone Link Melbourne

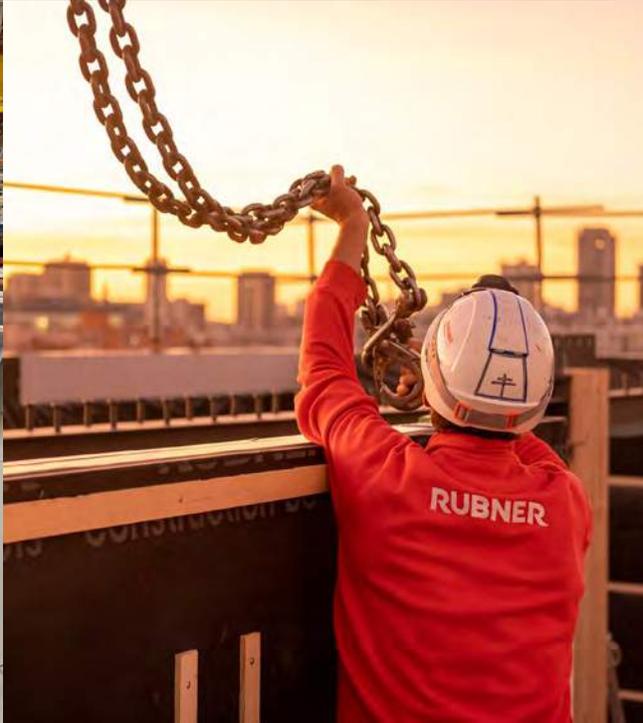


# Chadstone Link Melbourne Australia





# Your Timber Construction Partner



# Our Services

## Consulting Services and Support

Professional and experienced engineers to assist you in concept design/workshop design.

## Engineering and Design

Full detailed timber structure design (structural member and connection design).

## Production and Prefabrication

We deliver, manufacture and supply the products.

## On-Site Assembly

Installation work by our skilled workers or by our Asia partner specialist contractor.

## Site Construction Management

We ensure we will always secure professional project execution.



# What's next? Contact us.



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**BEISI JIA**

DIRECTOR  
BAUMSCHLAGER EBERLE

**be**

baumschlager eberle  
architekten



 Federal Ministry  
Republic of Austria  
Climate Action, Environment,  
Energy, Mobility,  
Innovation and Technology



**ATC**  
AUSTRIAN TECHNOLOGY CORPORATION



be

baumschlager eberle



baumschlager eberle

Beisi Jia

Director and Partner of Baumschlager Eberle Hong Kong Ltd  
Associate Professor at the University of Hong Kong

We are doing architecture design for:

Comfort

Sustainable

Low Energy

Intelligent Buildings



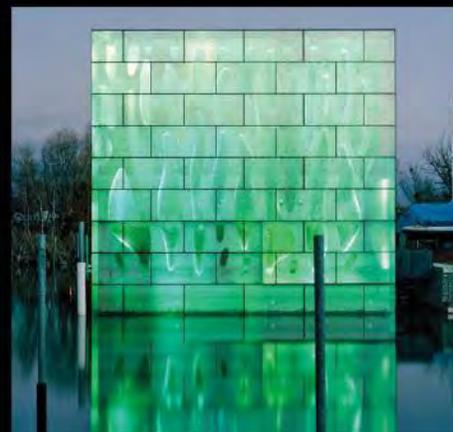
建成项目  
400+

分公司  
14

员工  
420

国际大奖  
60

# 300+ PROJECTS



over 300 successfully completed projects



World Health Organization  
UNAids Administrative Building, Geneva 1999

# What is BE?

Firmly **rooted in practice**,

BE have demonstrated a particular skill in which **flexibility, sustainable building, a high level of craftsmanship**, and **the beauty of architecture** are expertly combined in **reasonably priced**, simple compact buildings.

Their experience and know-how are considerably significant for researchers and practitioners with respect to the implementation of the Sustainable Building approach, which aims to achieve the successful **combination of research and practice**.

We design High Comfort and Low Energy Buildings

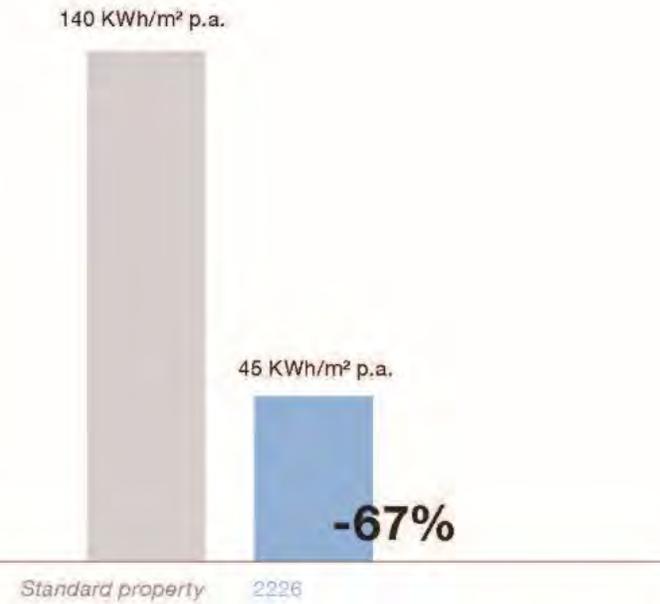
by

Intelligent with Knowledge, and  
in Technology

# ENERGY CONSUMPTION

## Energy Consumption

Source/Benchmark: comparison SIA  
2024 vs. measured values 2226



# LIFE CYCLE COSTS

## Life Cycle Costs (LCC)

Quelle:  
DIN Lebenszyklus-Management, A. Pelzeter

Source/ Benchmark:  
DIN Lebenszyklus-Management, A. Pelzeter

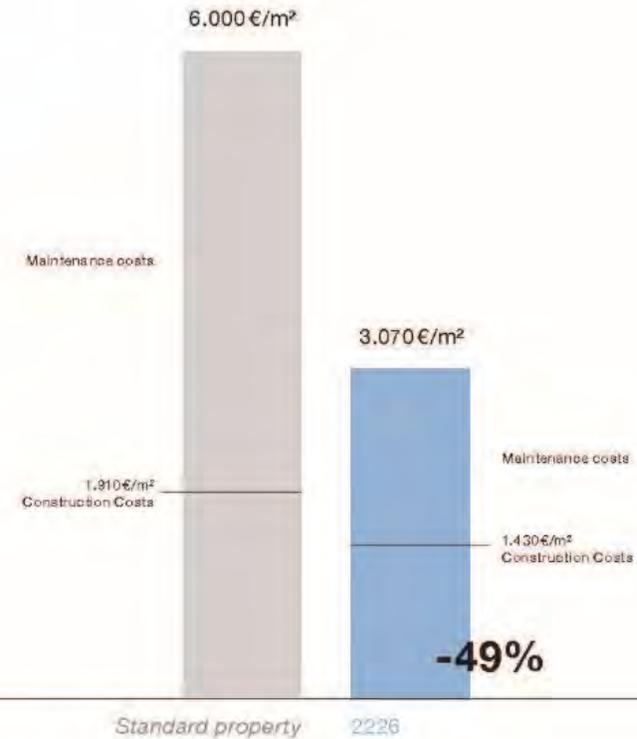
Zusammensetzung Lebenszykluskosten:

Composition of life-cycle costs:

|                           |      |                                 |      |
|---------------------------|------|---------------------------------|------|
| Herstellung KG 300        | 924€ | Manufacture, type of cost 300   | 924€ |
| Herstellung KG 400        | 254€ | Manufacture, type of cost 400   | 254€ |
| Instandsetzungen KG 300   | 59€  | Repairs, type of cost 300       | 59€  |
| Instandsetzungen KG 400   | 230€ | Repairs, type of cost 400       | 230€ |
| Wartung Inspektion KG 300 | 52€  | Maintenance/Inspection, type of | 52€  |
| Wartung Inspektion KG 400 | 290€ | Maintenance/Inspection, type of | 290€ |
| Reinigung                 | 205€ | Cleaning                        | 205€ |
| Energie                   | 974€ | Power                           | 974€ |
| Wasser/Abwasser           | 86€  | Water/Sewage                    | 86€  |

Rechenmodell je m<sup>2</sup> auf 50 Jahre inkl.  
1,5% Zinsen und 5% Energiepreisanstieg.  
KG 300 Baugrube, Gründung, Außenwände, Innenwände, Decken, Dächer, Konstruktive Einbauten  
KG 400: Techn. Anlagen, Wärmeanlagen, Lufttechn. Anlagen, Starkstrom, Fernmeldeanlagen, Wasser, Abwasser, Gas, Förderanlagen, Spezifische Anlagen, Automation

Computational model per m<sup>2</sup> for 50 years incl. 1.5% interest and 5% increase in energy prices. Type of cost 300: building excavation, foundation, exterior walls, interior walls, floor slabs, roofs, structural installations. Type of cost 400: technical systems, heating systems, ventilation systems, heavy current, telecommunication systems, water, sewage, gas, conveyor systems, specific installations, automation

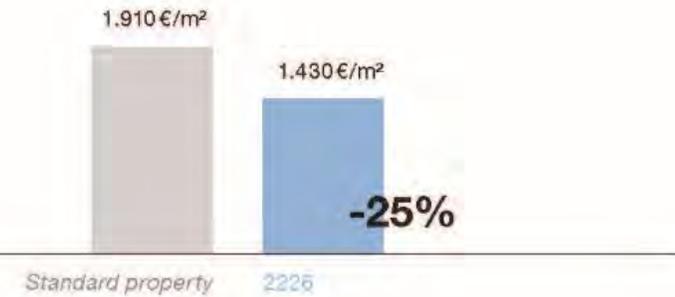


# CONSTRUCTION COSTS

## Construction Costs

Quelle:  
Vergleich Baukostenindex zu real abgerechneten Kosten von 2226 Lustenau ohne Rabatte, abgerechnete Kosten für 2226 Lustenau inkl. Rabatte 1.240€/m<sup>2</sup> BGF, je m<sup>2</sup> BGF und ohne Planungskosten

*Comparison of construction cost index for actually billed costs of 2226 Lustenau without deductibles, billed costs for 2226 incl. deductibles of 1,240€/m<sup>2</sup> of gross floor area, per m<sup>2</sup> of gross floor area, without planning costs*



Construction

建造

Window to wall ratio

窗墙比

Compactness

形体紧凑

Glazing

节能玻璃

Operable windows

可调窗户

**Building**

**optimization**

Shading

遮阳系统

Façade air tightness

气密性

优化建筑设计

Roof insulation

屋顶保温/隔热

Wall insulation

外墙保温/隔热

Floor insulation

楼板保温/隔热

Solution 1:

Collecting data, processing of data, **Feedback Information, Continually adjust the service equipment**

Solution 2:

Interactive between:

People and Architecture

Environment and Architecture

# Building has a brain !



Outdoor sensor



Indoor sensor (Xiaomi)

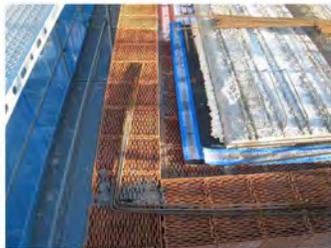


**BE 2226 System** No heating  
No cooling  
No mechanical  
ventilation

22°c -- 26 °c

- With conventional material and construction cost..

The Ceiling



The Brick



POROTHERM 38 H i N+F

POROTHERM 38 N+F

# Looking for Market in Hong Kong and China



ICEG盐城黑森林，江苏盐城 2021

Samples : our projects in China



Moma  
Beijing, China



# ANDREAS GANAHL & BENJAMIN ERTL

MANAGING DIRECTORS  
LIEBHERR (HKG) LIMITED

# LIEBHERR



Federal Ministry  
Republic of Austria  
Climate Action, Environment,  
Energy, Mobility,  
Innovation and Technology



ATC  
AUSTRIAN TECHNOLOGY CORPORATION

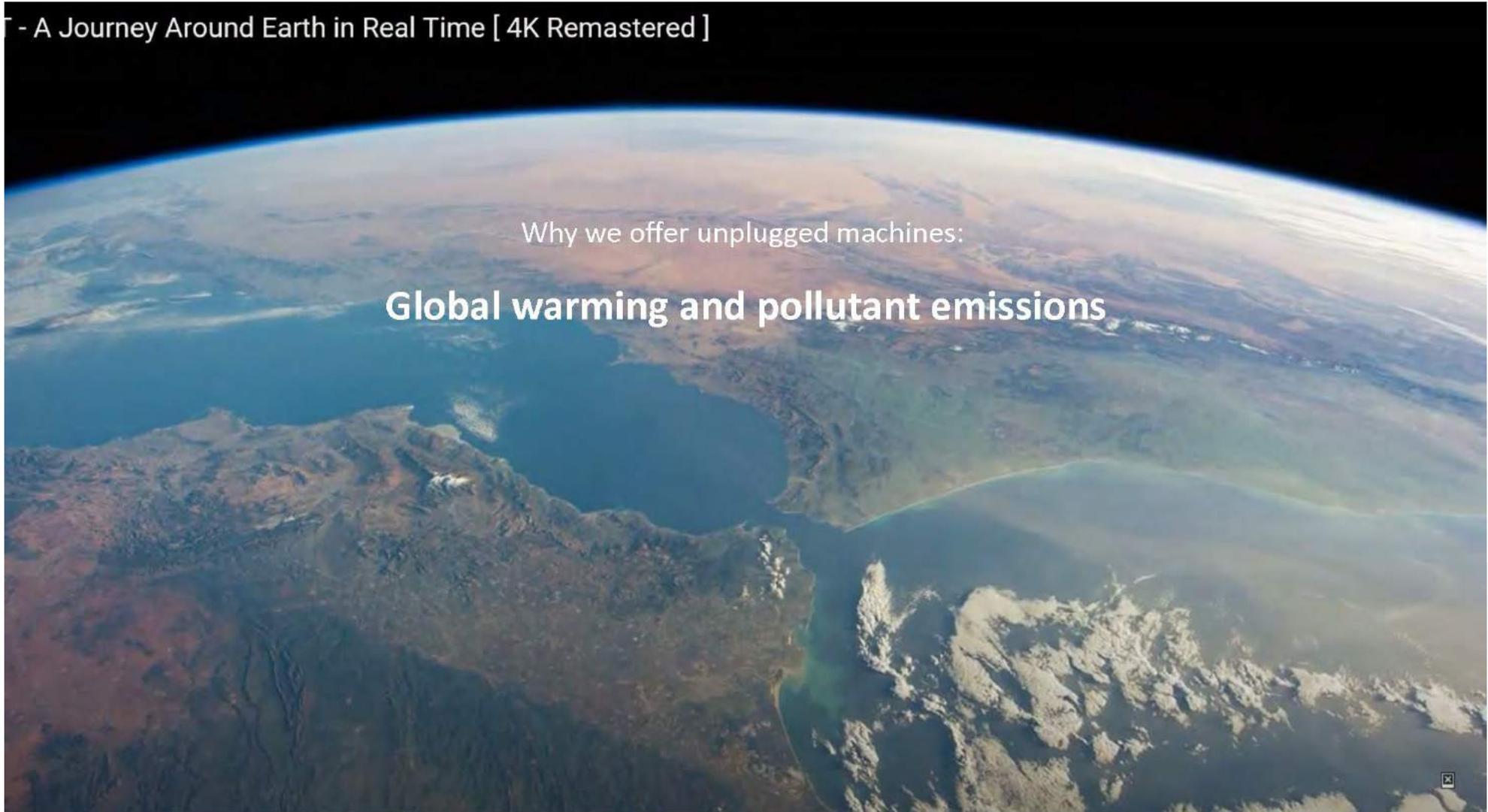


## Technology/Product/Solution

- A Journey Around Earth in Real Time [ 4K Remastered ]

Why we offer unplugged machines:

**Global warming and pollutant emissions**



## Technology/Product/Solution

Zero emission

Lower energy cost

Lower noise level



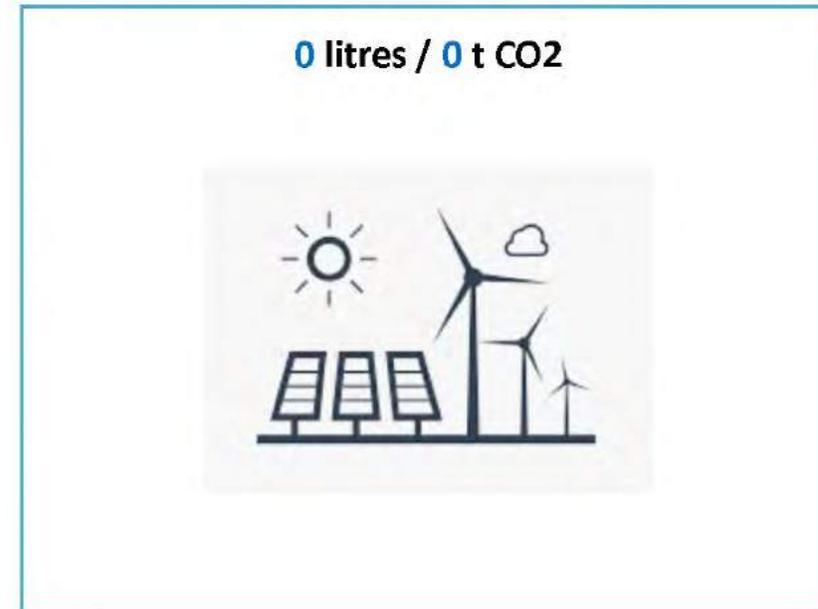
## Technology/Product/Solution

Average consumption of Diesel fuel per year

LR 1250.1



LR 1250.1 *unplugged*



1500 h/a; 7,38 l/h; 11070 l/a, 29,3 t CO<sub>2</sub>; 1 l Diesel = 2,6 kg CO<sub>2</sub>

# Austrian Technology Day LIEBHERR (HKG) Limited

## Reference and Pictures



## Cooperation / Partner and Buyers



Eirik Kynningsrud  
General Manager



Morten Heli-Hansen  
General Manager



### **Why have you decided to buy an electric crawler crane?**

*Kynningsrud Nordic Crane is green in every sense. We are aware that we are part of society and therefore we are investing in a green future. When we invest, we think green and new machines meet the market environmental requirements, and therefore support our HSQ strategy. For this reason, the decision that we wanted to be the first company in the world with the first electrical crawler crane was easy.*

### **How relevant is an electric crane to your market?**

*Our main market in Norway is Oslo. In 2019 the EU declared Oslo as the environmental capital which stands as a role model for green solutions. Oslo aims to be a fossil-free city by 2030.*

### **How do you see the future for electric construction machines (Zero Emission)?**

*In Norway there will be huge infrastructure projects in the coming 20 years – both in road construction and railways. The government's goal is to reduce emissions and it is important that we can deliver electric construction machines for all type of projects.*

<https://nckynningsrud.com/en/worlds-first-electric-crawler-crane/>

The world's first owner of a battery electric crawler crane: Kynningsrud