

JANE NIXON, ARUP, 12TH SEPTEMBER 2024

Evolution of Ken Rosewall Arena



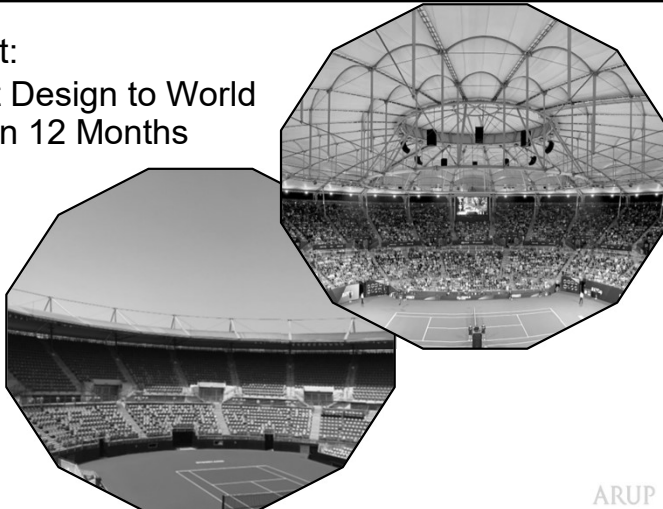
Lightweight Structures Association Australasia Inc. 1

1

A Digital Sprint: From Concept Design to World Cup Stadium in 12 Months

Structural Team:
Andrew Johnson
Xavier Nuttall
Hannah Lazenby

Presentation:
Jane Nixon

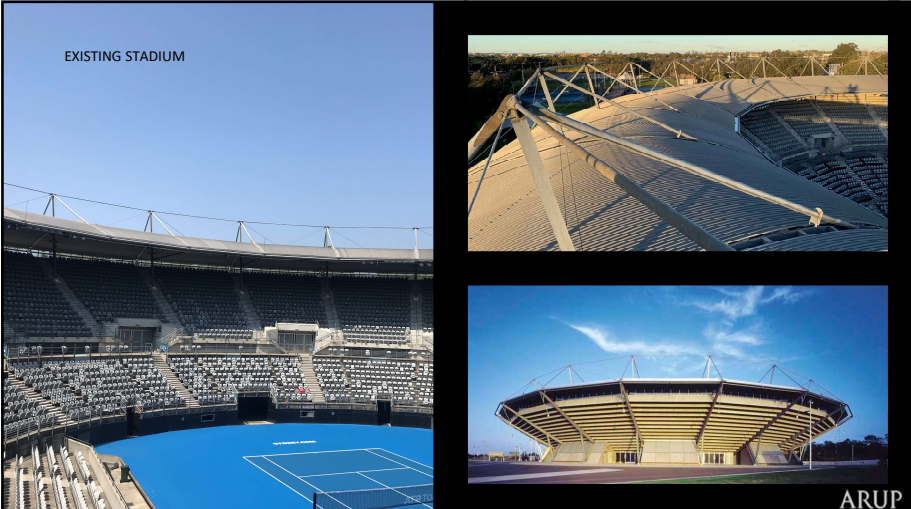


Lightweight Structures Association Australia

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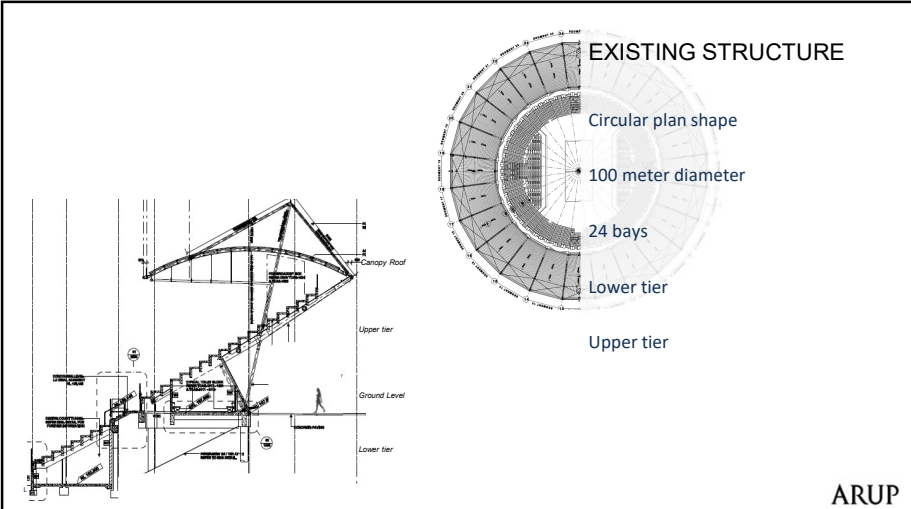
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EXISTING STADIUM



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3



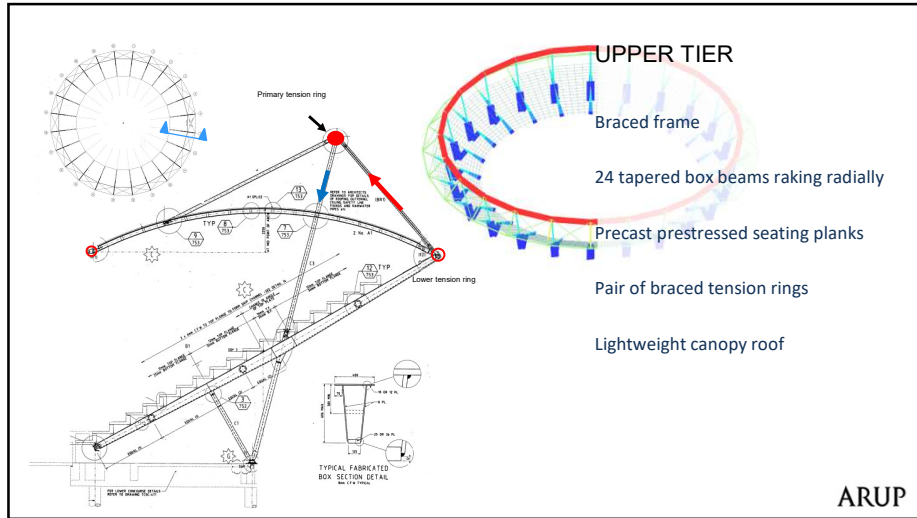
EXISTING STRUCTURE

- Circular plan shape
- 100 meter diameter
- 24 bays
- Lower tier
- Upper tier

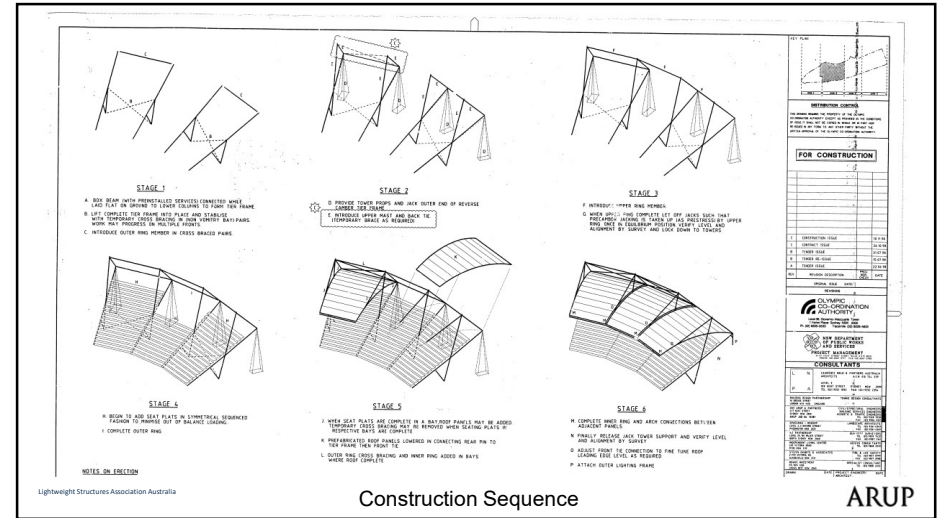
Canopy Roof
Upper tier
Ground Level
Lower tier

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4



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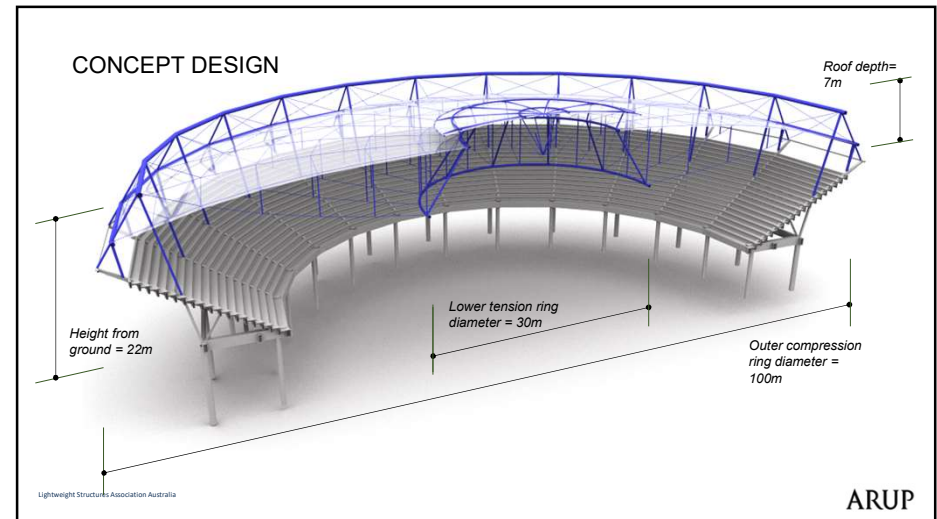
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DESIGN BRIEF	THE TEAM
FULL ROOF COVERAGE	COX ARCHITECTURE
12 MONTH PROGRAM	FABRIC STRUCTURE AND TEMPORARY WORKS: MAFFEIS ENGINEERING
ECONOMICAL SOLUTION	CABLES: REDAELLI
WORLD CLASS DESIGN	STEELWORK: CHINA GRAND FABRICATION

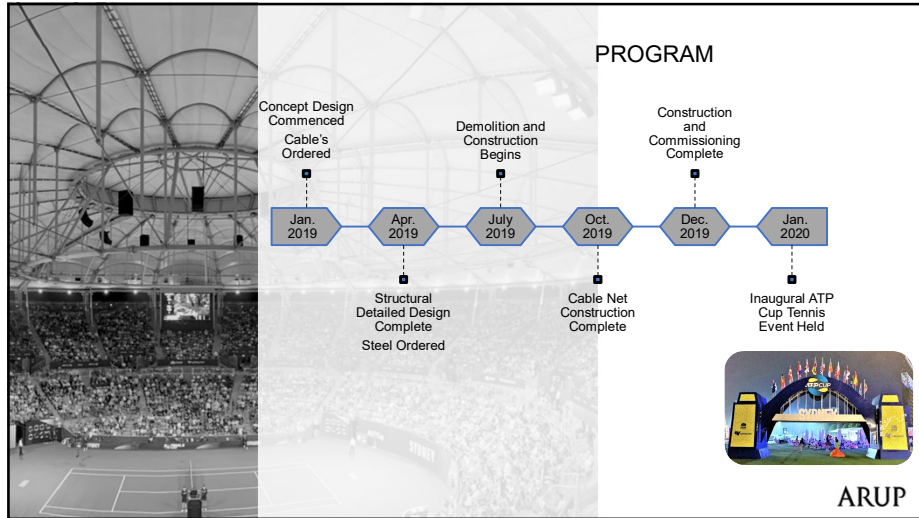
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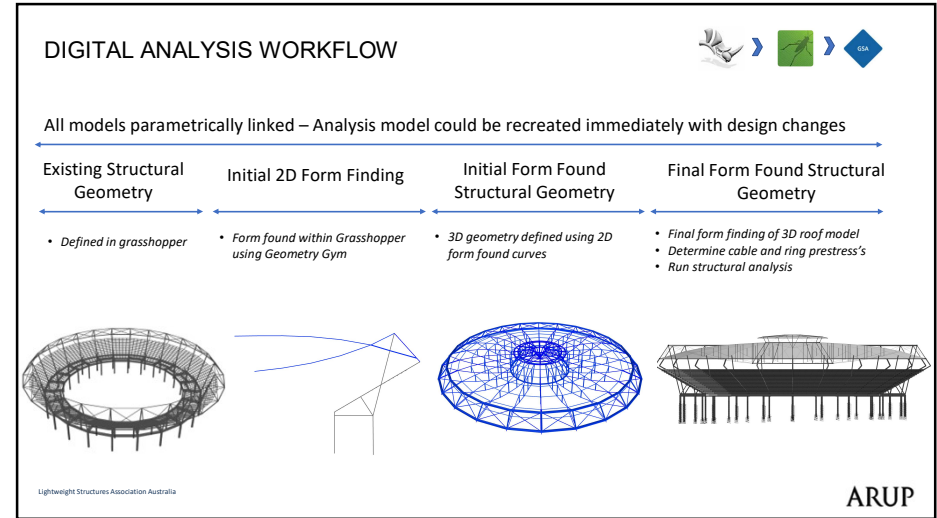
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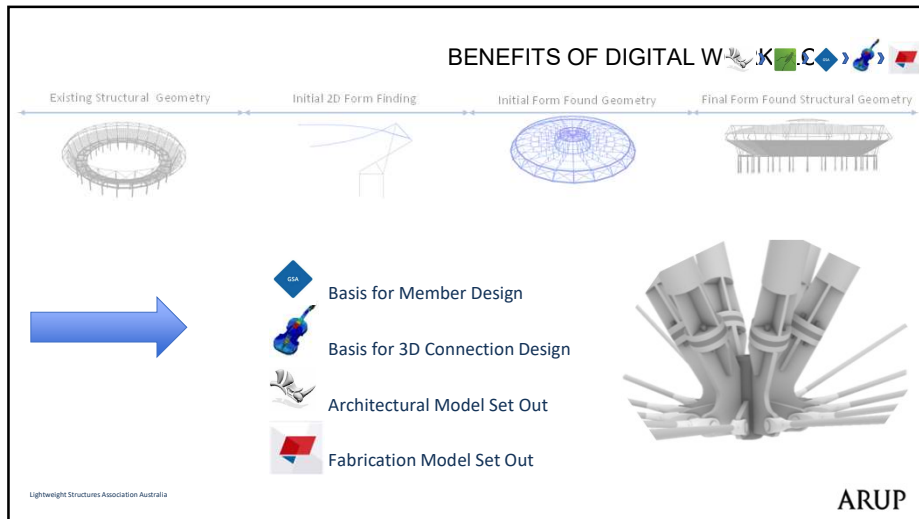
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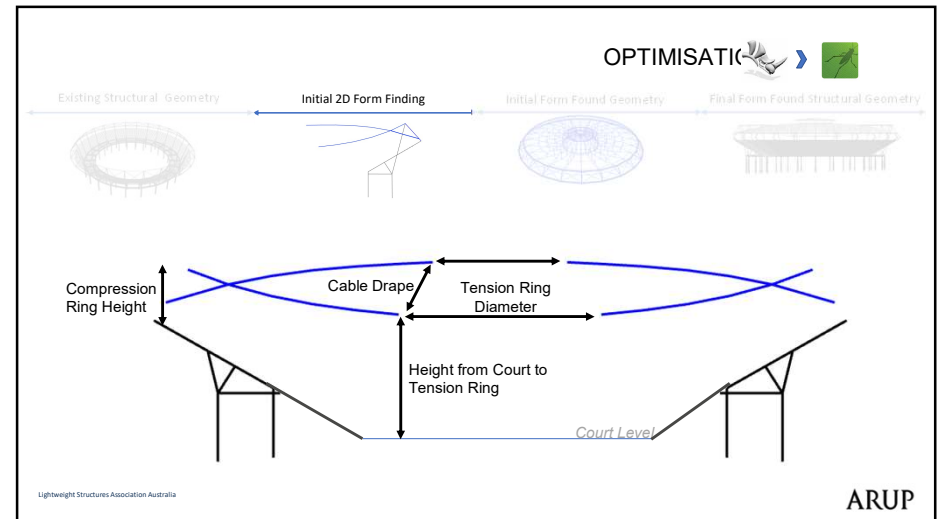
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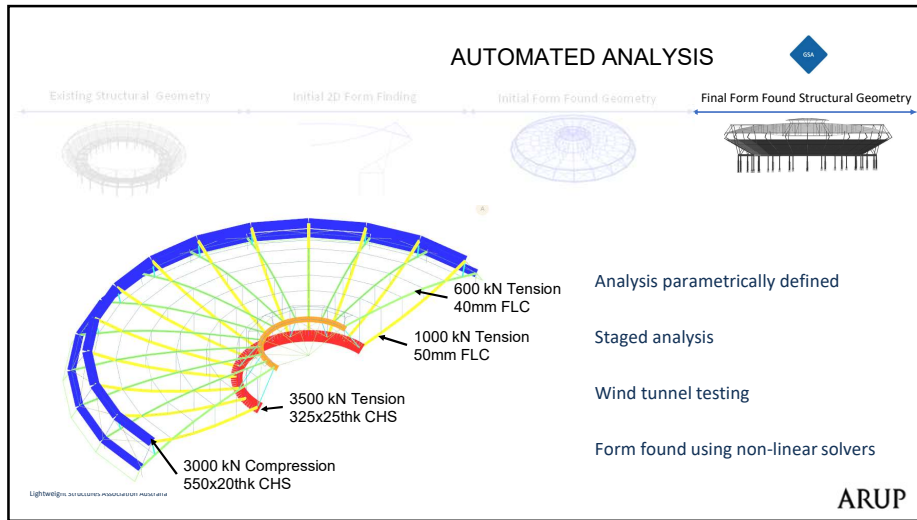
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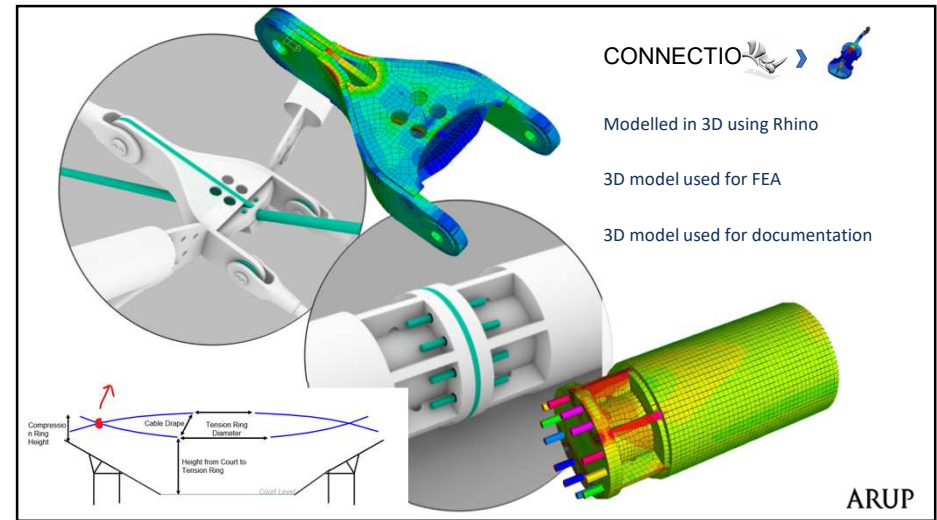
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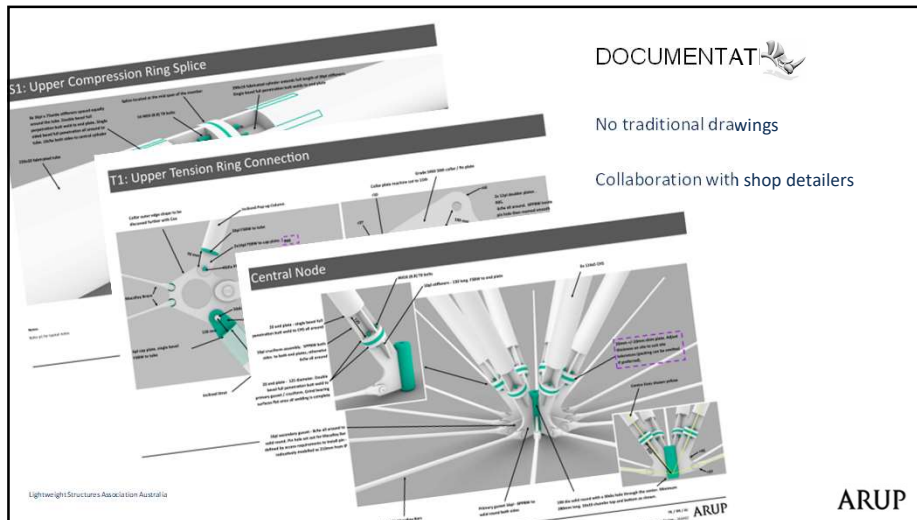
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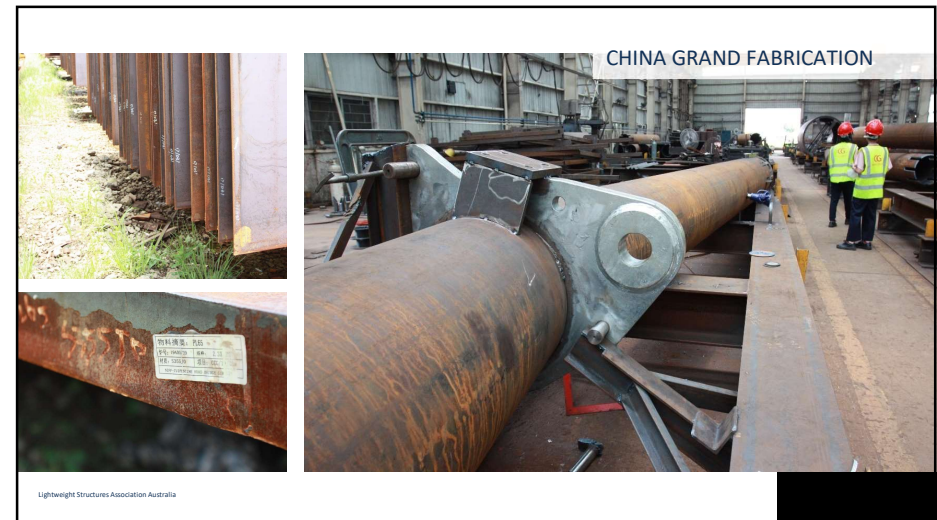
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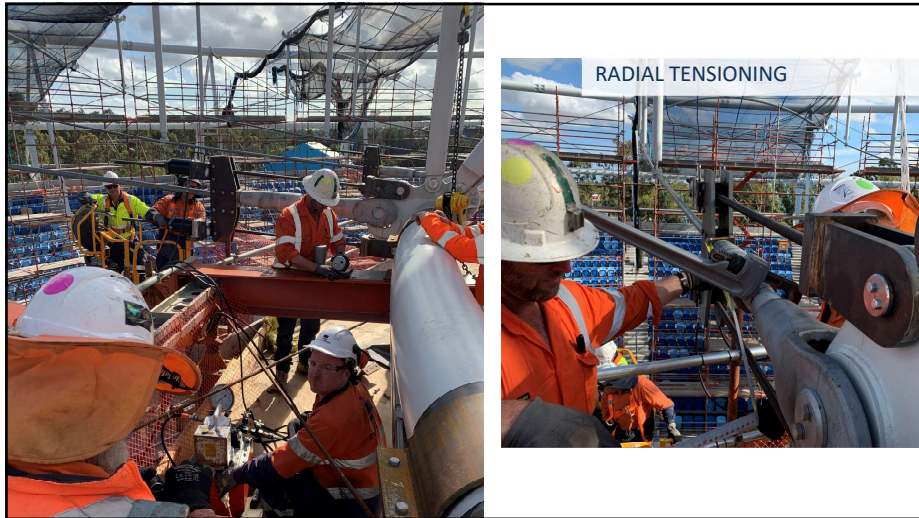
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RADIAL TENSIONING

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LIFT OFF...

22

SUCCESS

- 41% EQUIVALENT EMBODIED CARBON – SAVING 1780 TONNES
- 12 MONTH DELIVERY
- DIGITAL & HOLISTIC DESIGN

2,946,290 kgCO2e

1,208,343 kgCO2e

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CLOSING STATEMENT

Thank you

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