



# DIGITAL CONSTRUCTION

Capability Statement



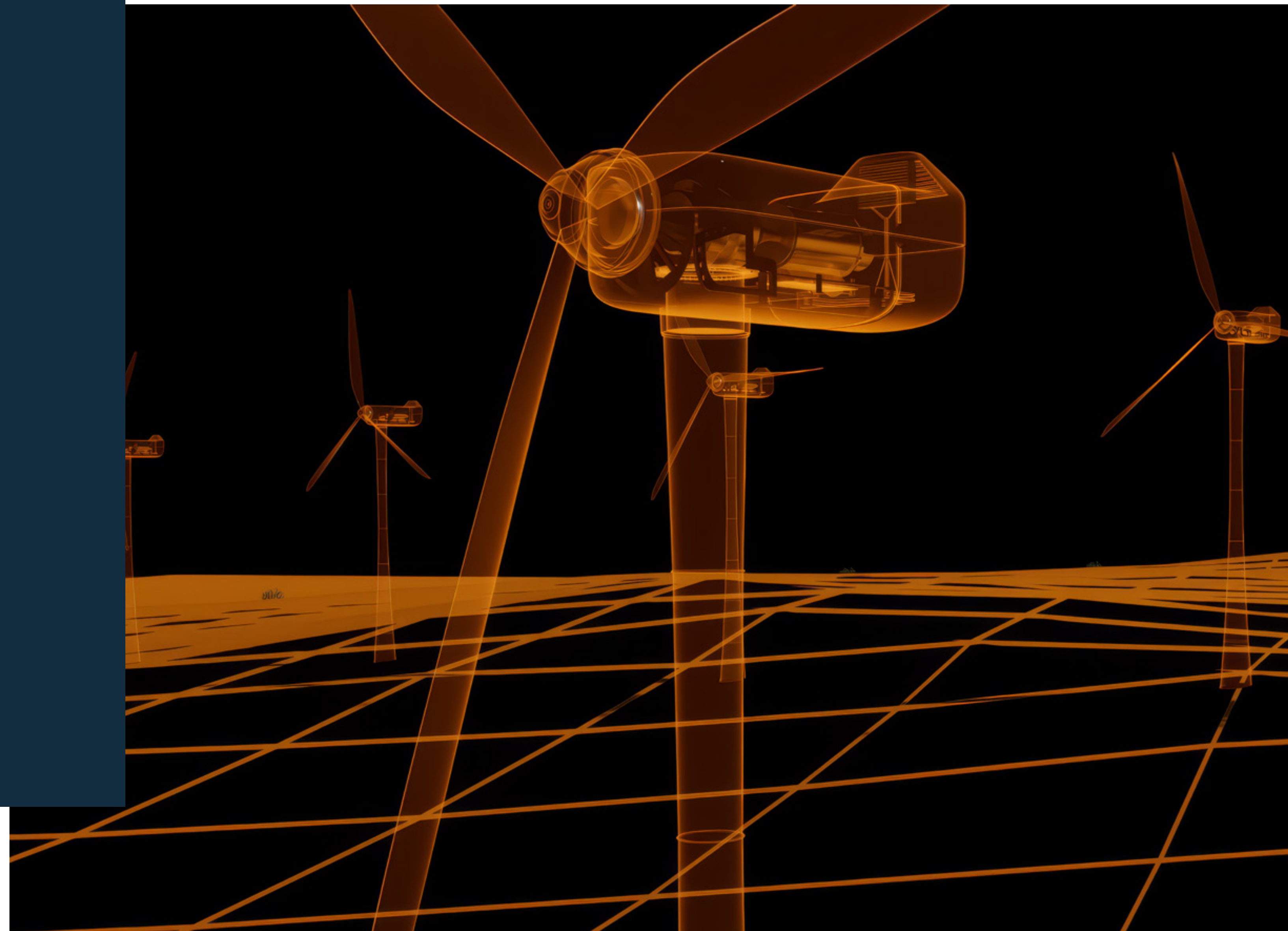


# CaSE Digital Construction

CaSE Digital Construction is our new service, to redefine the boundaries of design and construction and bring infrastructure to life. Combining delivery expertise with digital technology, we provide tailored solutions to address evolving infrastructure challenges.

We incorporate digital solutions across the entire project lifecycle. Whether utilising 3D models to create lifelike videos that communicate methodologies or offering site digitisation for remote inspections, we assist clients in mitigating risks, increasing productivity, and enhancing project understanding before implementing on-site.

Experience the future of engineering with CaSE Digital Construction.





## Our Services

# Visualisation

Employ realistic animations, animated methodologies, videos, renders, stills and fly-throughs created from accurate digital 3D models to effectively communicate a complex design or methodology of a project. Our visualisations ensure accurate representation of plans, fostering community understanding and early identification of safety, workforce and user issues.

Our team of specialists can model your design and construction methodology using the latest gaming visualisation technologies for the most realistic project representation possible.

CaSE provides visualisations to support contractor's communicating designs and methodologies and also, project owners who aim to engage with stakeholders.







## Key Benefits

- ▶ Communicate effectively with visual language in bid submissions and presentations
- ▶ Use storytelling to convey complex concepts, highlighting key points, benefits and impacts
- ▶ Involve stakeholders by simplifying technical information into relatable and engaging content
- ▶ Build rapport by addressing concerns and incorporating stakeholders' feedback into plans
- ▶ Engage project supporters by leveraging team expertise to identify and mitigate risks early
- ▶ Build community trust and ensure agreed expectations with visually documented plans

## Digital tools can provide:

- ▶ Virtual environments (VR/AR)
- ▶ Fly-throughs
- ▶ Rendered videos and stills
- ▶ Model Development



# Site Digitisation

Inspect a remote bridge and develop a condition report without leaving your desk, or validate excavation and spoil stockpile volumes just by taking a walk. These are two among many examples of how Site Digitisation is giving back precious time to your workforce.

Make use of established spatial technologies like laser scanning and photogrammetry to precisely measure site conditions or progress and combine this data with automated comparisons against historical sets for accurate volume take-offs, defect detection and change identification. Our Site Digitisation tools provide a visual representation and accurate model of existing site conditions, generate models of existing structures or excavate surfaces before you and your team set foot on-site or begin designing.

With minimal investment, our specialists can support you in streamlining data collection, saving workforce time and making informed decisions based on validated information.





## Key Benefits

- ▶ Minimise errors and design risks by using 3D scanning technology to capture precise measurements of complex volumes and surfaces
- ▶ Be able to compare scan data with design models to identify discrepancies and ensure alignment upfront
- ▶ Ensure environmental regulation compliance by confidently tracking contamination handling
- ▶ Reduce effort in collecting existing spatial condition data by 25%
- ▶ Use our tools to enhance safety by reducing human exposure to hazardous areas

## Digital tools can provide:

- ▶ Laser scanning
- ▶ Photogrammetry
- ▶ Generating of models
- ▶ Structural condition inspection
- ▶ Automated progress payment assessment

## Our Services

# Construction Safety

By virtually simulating construction designs and methods beforehand, you can find hidden project risks and prevent incidents before finalising your plans. Engage and communicate safety protocols effectively to your workforce using animated and visual environments, surpassing traditional methods of 2D drawings and documents.

Our team can meticulously model your construction space and methods in a 3D staged environment, enabling interactive engagement. Take advantage of digital rehearsal workshops for Safety in Design (SiD) or Hazard Identification (HAZID) to proactively address potential safety concerns. Offer augmented reality (AR) and virtual reality (VR) support for worker induction and training, enhancing safety education.

Our capabilities encompass QR codes to access animations illustrating construction method statements, ensuring clear understanding and adherence to safety protocols. Develop training videos tailored to specific work activities, empowering your workforce with essential safety knowledge and skills.







## Key Benefits

- ▶ Facilitate the integration of individuals from non-construction backgrounds into your workforce by providing comprehensive digital support
- ▶ Enhance project safety education for specific work activities by developing tailored induction and training videos
- ▶ Avoid delays, extra costs and reputation damage by preventing injuries to your workforce with safe virtual environments
- ▶ Test plans and methods in advance of construction to reduce delays and changes due to a safety incident
- ▶ Ensure compliance with legislation by providing a reasonable, effective and clear communication of risks

## Digital tools can provide:

- ▶ Facilitated 3D SiD / HAZOP workshops
- ▶ High-quality training and induction videos
- ▶ Digital Rehearsal of critical works
- ▶ 3D environment / platform provisioning for stakeholder sessions
- ▶ AR / VR environments for training and risk assessment

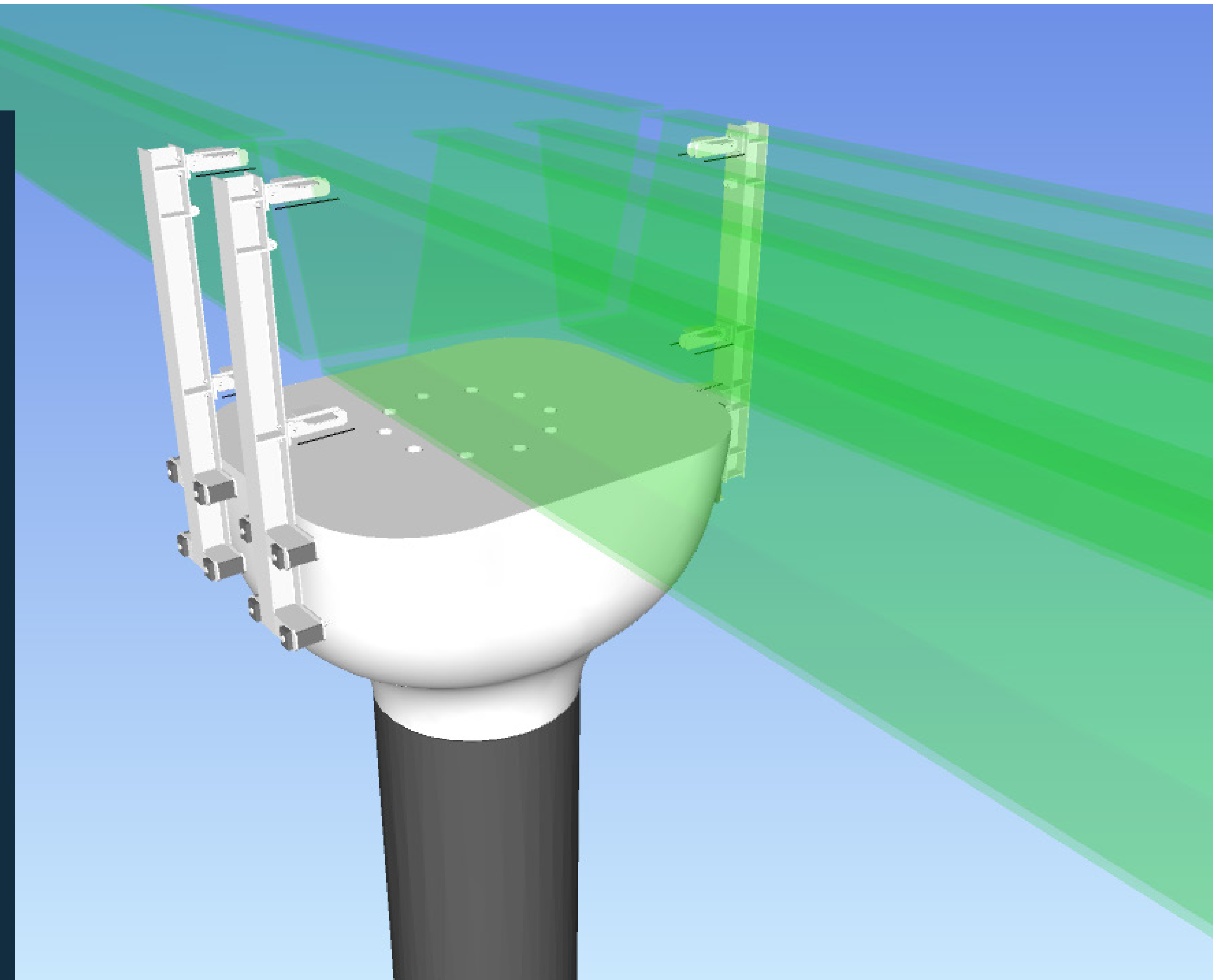


# BIM & Digital Engineering

In today's construction landscape, timely decision-making is paramount and the data for making decisions must be prompt, accurate and available in the right hands. BIM and Digital Engineering provide a rich project data environment to succeed, combining robust, accurate project data of time, cost, and materials for example, integrating it in one place with the 3D design.

CaSE offers comprehensive BIM & Digital Engineering solutions, integrating 3D models with time (4D programming) and cost (5D cost phasing) for advanced project planning and management. It facilitates precise scheduling and cost estimation, ensuring project success from inception to completion.

Leverage our expertise to deliver BIM and Digital Engineering models tailored to your project's needs, complete with detailed 3D models and essential data such as carbon embodiment and material specifications.





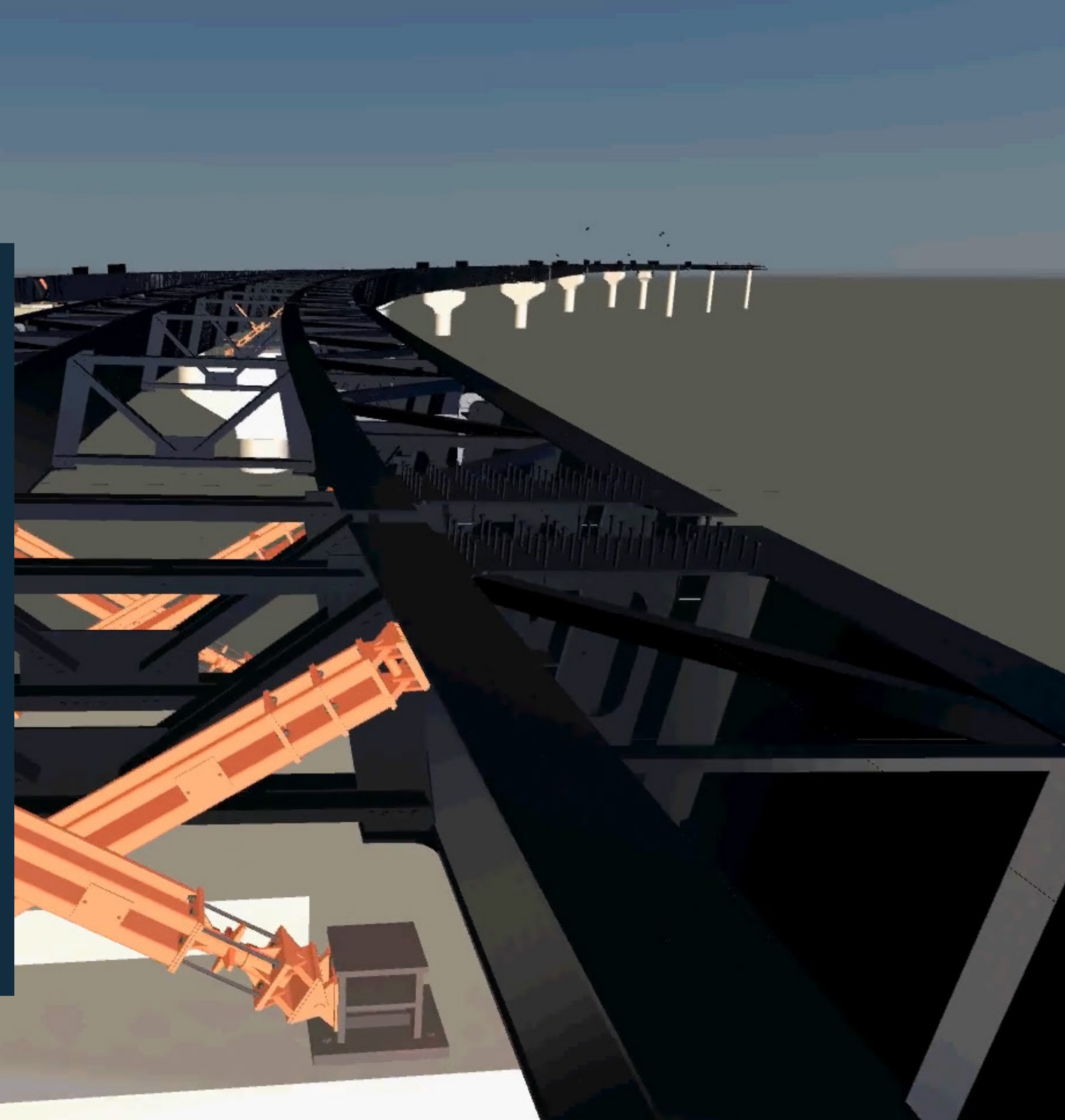
## Our Services

### Key Benefits

- ▶ Mitigate risks and enhance project coordination through clash detection and design resolution
- ▶ Integrate time and cost elements, and provide stakeholders with a comprehensive understanding of project conditions and likely outcomes
- ▶ Make better decisions that improve project outcomes in time and cost by pre-visualising the construction program and testing it for missed assumptions
- ▶ Reduce carbon, waste and overall material usage by applying data-proven design to your decisions

### Digital tools can provide:

- ▶ 3D modelling
- ▶ 4D scheduling and 5D cost phasing
- ▶ Carbon estimation
- ▶ Data systems and structures
- ▶ BIM and Digital Engineering management







**Matthew Kehoe**  
General Manager

Matthew is a seasoned leader in Digital Construction with over a decade of experience in civil and structural engineering, focusing on public infrastructure projects in Australia and Asia. As a Digital Construction expert, Matthew employs his extensive industry knowledge and network to pioneer innovative solutions, prioritising collaboration and efficient project management to tackle complex challenges.

His involvement in key global infrastructure projects has showcased his capacity for problem-solving and operational enhancement, delivering significant benefits to clients and governmental bodies.



**Alex Currie**  
Visual Animator

Alex is a Visual Animator with over four years of experience in the engineering industry, focused on Marine and Civil Engineering in Scotland and Australia. She specialises in delivering visualisation solutions for global infrastructure projects, Alex applies her 3D modelling and animation expertise to empower clients to make informed project decisions with high-quality data at hand.

With experience spanning all project lifecycle phases, from tendering to completion, Alex excels in presenting reliable information and improving communication through clear visualisations to address stakeholders' challenges.



**Luis Diaz**  
Visual Design Lead

Luis is an expert in crafting technical animations that intricately detail construction methodologies blending aesthetics with precision to produce engaging visual content. In digitally rehearsing construction processes, Luis is capable of performing during early design stages and project tendering, driving efficiency and accuracy over the full project.

Proficient in a diverse array of tools and techniques, including modelling, BIM, 3D scanning, animation, video editing, and visual effects, Luis offers a comprehensive understanding of civil construction processes. Over the years, he has spearheaded the integration of immersive technologies such as VR, AR, and AI into many industry players offering modern cutting-edge digital tools to clients and partners.



**Clement Cazi**  
Senior BIM Engineer

Clement is a Senior BIM Engineer with more than a decade of experience. Beginning his career in building methods engineering in France, he spent eight years refining his expertise before transitioning to Australia, where he specialised in tunnel design engineering, including methods design and temporary works.

With a Master's degree in Civil Engineering, he brings a comprehensive understanding of architectural and structural plans, along with a commitment to delivering high-quality solutions that adhere to Australian Standards. Over his experience, he also showcases proficiency in AutoCAD, Revit, and scripting languages like Dynamo and Python.



# Our Global Operation

## 24 Hour Team

Accelerate the delivery of effective solutions

## 10 Offices

Our talent is spread all over the world







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Level 8, 56 Berry Street, North Sydney, NSW 2060

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G14, New Alderston House, 3 Dove Wynd, Bellshill ML4 3FB

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**Disclaimer:**

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