TECHNICAL 3D ANIMATION · INTERACTIVE SIMULATIONS · DIGITAL LEARNING · INDUSTRIAL SAFETY

Industrial knowledge. Digital innovation. Practical solutions.



Who we are

MechSim3D Pty Ltd is an Australian-owned technical solutions business based in New South Wales, developing 3D visualisations, interactive simulations and digital resources for industrial training, maintenance, safety and operational applications.

We combine extensive practical experience in mechanical maintenance, heavy equipment, asset management and project delivery with modern digital development technologies, turning complex technical information into clear, useful resources that support real-world understanding and decision-making.

What we deliver

- Technically accurate 3D animations and cutaway system visualisations
- Interactive equipment and fault-finding simulations
- Digital learning content and targeted technical microlearning
- Incident reconstruction and safety communication resources
- Visual work instructions, knowledge capture and custom operational tools

Core capabilities

3D technical animation & visualisation

Mechanical systems, fluid power circuits, internal component movements, transparent views and operating sequences

Interactive 3D simulations

Virtual equipment exploration, component interaction, system behaviour, diagnostic scenarios and maintenance familiarisation.

Digital learning development

Targeted technical modules and video or interactive content prepared for client-managed learning environments

Incident reconstruction & safety

Visual representation of equipment failures, event sequences and mechanical interactions to support investigations and workforce communication.

Digital work instructions

Step-by-step visual procedures and reusable resources that help standardise practices and preserve technical knowledge.

Custom operational software

Development of tailored browser-based, desktop and mobile applications supporting maintenance planning, operational workflows, reporting and technical training.

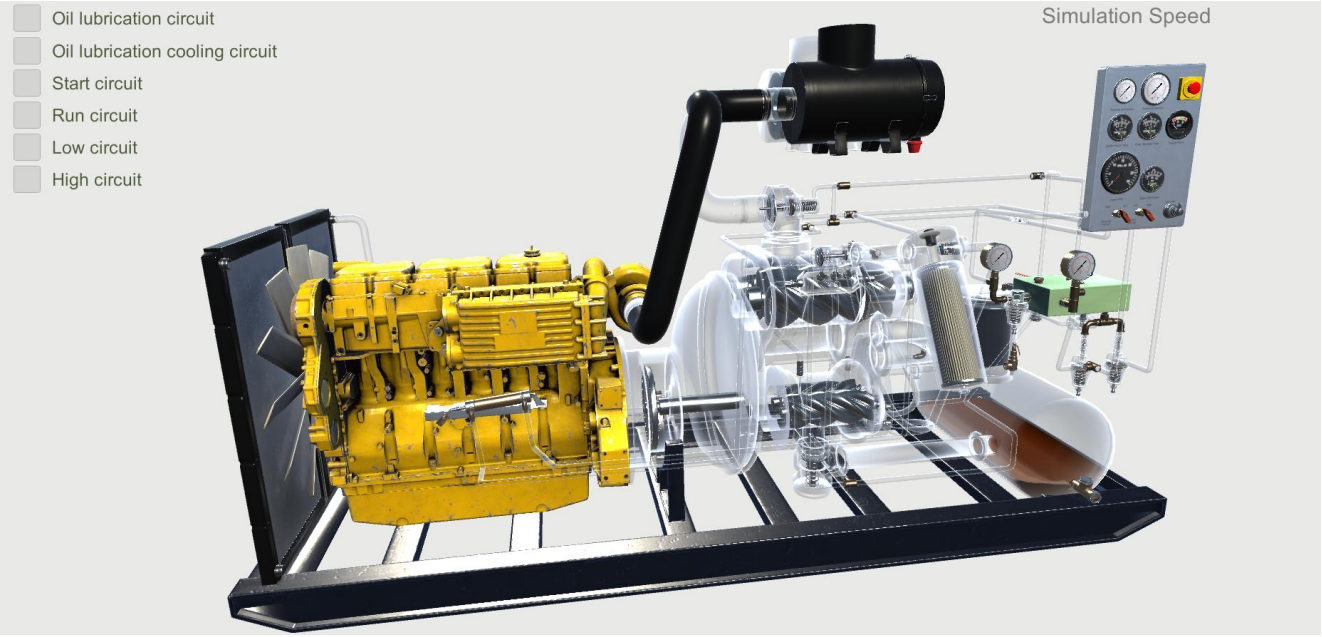
Industries we support

Mining & resources | Drilling | Equipment manufacturers & OEMs | Universities & research | Learning & development | Manufacturing & engineering | Civil construction & industrial maintenance

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Industry problems addressed

CHALLENGE	OUR RESPONSE
Complex equipment is hard to explain	3D views show component interaction and internal operation.
Training equipment is limited	Digital familiarisation and scenario-based learning.
Workforce knowledge is hard to retain	Procedures and understanding captured in digital libraries
Fault-finding needs applied reasoning	Diagnostic exercises interactive system scenarios – Risk free
Incidents are hard to communicate	Clear visual reconstructions of events and hazards.
Maintenance workflows lack visibility	Tailored planning, tracking and reporting tools.



Our point of difference

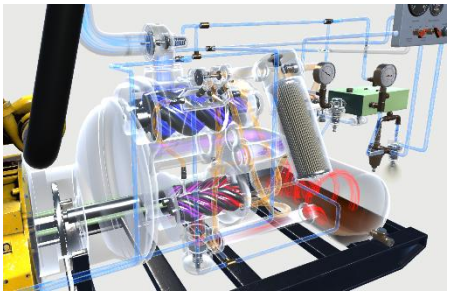
Real industry experience
Extensive hands-on experience in heavy mechanical maintenance, mining equipment, industrial systems and project management, ensuring technically relevant and practical training solutions.

Industry-led development
Solutions developed around identified learning objectives and industry requirements. We select the most appropriate technology to achieve the intended outcome, from simple 3D animations to fully interactive simulations.

Flexible delivery
Specialist 3D modelling, animation and software development expertise, tailored to project requirements. Structured client reviews and technical validation help ensure quality, accuracy and alignment with agreed outcomes.

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Selected project examples



Equipment simulations and diagnostics

Interactive 3D equipment visualisation demonstrating internal components, system operation and mechanical relationships.



3D safe work procedures

Visual maintenance instructions supporting procedural understanding, equipment familiarisation and safe work practices.



Inspections

Digital 3D representation supporting inspection planning, component identification and maintenance communication.

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