

3D Digital Twin Technology

Reduce unplanned downtime

Predict, prevent and intervene swiftly



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Introducing invisu

invisu Ltd is an innovative technology company with the goal of helping manufacturing, logistics and automation companies save money and reduce CO2 emissions on production lines and complex manufacturing equipment.

The invisu solution is a 3D interactive software (Digital Twin) which manages and controls the end-to end lifecycle of the equipment itself rather than manufacturing process. It helps users prevent unplanned downtime before it occurs (which globally now costs the world's 500 biggest companies 11% of their revenues, a total of \$1.4 trillion per year). It provides rapid intervention at the point of need upon the occurrence of equipment/production stoppages.

Aimed at OEM's and their end users, the system allows you to control and monitor everything from assembly and installation to maintenance, repairs, parts, and decommissioning of equipment. It is an ecosystem of everything your engineering teams need to keep your facility running at maximum capacity.

To assist companies who wish to digitise and move away from paper-based systems, we provide a technical authoring of product and machinery documentation service to include the creation of fully interactive 3D maintenance procedures and catalogues.

invisu is actively being used in the market by companies such as Amazon and is in continuous development with condition based monitoring and predictive maintenance using Al planned as part of future development.







How invisu Works

The system provides complete end-to-end life cycle care for complex equipment and machinery and assists with assembly, installation, qualification, engineering and preventative and predictive maintenance.



invisu Features



Control Complex Installations

- Court Investigation Countries

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- Installation documentation and quality control
- Digital installation process including dynamic PDF generation
- Full featured installation qualification authoring with granular tests and signoffs
- Full audit log of completed tests and digital signoffs by user



Operational Qualification



- Operational documentation and quality control
- Digital operational qualification process including dynamic PDF generation
- Full featured operational qualification authoring with granular tests and signoffs
- Full audit log of completed tests and digital signoffs by user
- Digital O&M manuals.



3D Interactive Maintenance Procedures & Parts Ordering

- 3D interactive machine walkthroughs
- Maintenance work orders
- Full audit log of completed tasks by user
- Full spares catalogue
- 3D interactive modelling to order parts
- Part detailed numbers with ability to create purchase orders
- Bill of materials



invisu Features



Preventative Maintenance Scheduling

Institution Qualification

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- Manage preventative maintenance
- Automated maintenance schedule and procedures
- Detailed pre-authored maintenance instructions
- Parts kits for scheduled maintenance tasks with 'just in time' delivery
- Incomplete maintenance notifications for warranty purposes



Digitised Documentation & 360 Scans



- Organise manuals, drawings and CAD files
- Easily updatable digital manuals with dynamic PDF generation
- Organise mechanical, electrical and pneumatic drawings
- 3D interactive walkaround, allowing users to visualise the working environment and view documentation remotely without being physically present on site



Task Management & Communication



- Manage installation, operational and qualification procedures
- Manage preventative maintenance and pre-schedule maintenance checklists
- Report equipment faults
- Full audit log of completed tasks by users
- Inter-user messaging
- Communicate with equipment manufacturers and technical authors

invisu Features



Engineer Training

Share best practice using the invisu Training System, enabling specialist knowledge to be shared with the next generation of engineers.

- 3D interactive learning and testing, including walkarounds of the working environment
- Learning materials in various formats including interactive 3D breakdowns and explanations. 3D models show, step by step, how to resolve problems
- Individual learning records, automated repeat reminders and new topics
- Improve knowledge retention and measure success over time with management information and data reporting
- Logging system measures user interactions with documentation



Future Development

invisu is under continuous development and improvement.

- Condition Based Monitoring
- Diagnostic Troubleshooting
- Predictive Maintenance







Technical & CAD Authoring

Quality documentation is vital to an organisation's success and critical for your customers.

To accompany the invisu product, we can provide full authoring of product and machinery documentation to all sectors of industry. This 3D communication offers an intuitive, knowledge transfer which eliminates the risk of information being misinterpreted as is common with traditional methods.

Process & Machinery Document Authoring



3D Interactive Creation and Support Documentation



360 HD scans and virtual walkthroughs of your equipment and production lines



Training documentation creation with 3D interactive animated e-learning procedures



How invisu is Delivered



Scope Data



Deployment



Obtain Feedback



Training

Project Commencement Meeting

Meet the Project Manager. Identify the client's requirements.



Liaise with Subject Matter Expert (SME) / Technical Lead Identify technical content required.

Understand the technical detail.



Deploy invisu into the client's business location(s) as required.



Produce draft content and deliver on invisu for review by the SME.



Obtain comments from SME / Technical Lead and then implement on invisu.

Delivery

Deliver the concept to the client as a built package.



Deliver bespoke user-friendly training to the client/their employees on how to use invisu.

Benefits of Using invisu

By implementing invisu in your business, you can reduce costs and emissions whilst improving efficiency and increasing productivity.

| 1 | Reduction in unplanned downtime of machinery and equipment | |
|----|--|--|
| 2 | Improved equipment installation and qualification process | |
| 3 | Improved maintenance and lifecycle of machinery and equipment | |
| 4 | Identify and rectify issues and equipment breakdowns more efficiently | |
| 5 | Reduction in travel costs and carbon emissions as problems can be solved remotely | |
| 6 | Paper documents, such as manuals, can be digitally authored and stored securely, resulting in waste reduction | |
| 7 | Reduction in warranty claims for OEM's | |
| 8 | Improved parts ordering process and stock management | |
| 9 | Training system for employees. Best practice can be shared, and installations/part replacements carried out to specification | |
| 10 | Detailed data analytics and reports to assist financial teams | |
| 11 | Improved overall service delivery for your customers | |

Industry Sectors

invisu has been developed to assist companies in various sectors of industry and is adaptable around implementation and usage.

invisu can help eliminate downtime, repair costs and warranty claims. It can support market changes, increase efficiencies, and provide cost savings for Original Equipment Manufacturers and their end users.

Manufacturing (with automated production and distribution lines)

Automotive

Logistics & Distribution Centres

Ports & Shipping

Food & Beverage

Pharmaceutical

Airport Baggage Handling Systems (BHS) and Security



Case Study - Automotive



The Challenge

Luxury SUV Manufacturer Production Line Down for 4 Hours

We visited a luxury SUV manufacturer and whilst there the production line went down. One SUV should have been coming off the production line every 80 seconds. Over the 4 hours, \$18 million was lost in revenue.

3.5 hours of the 4 hours was spent by the maintenance team looking for part numbers and establishing the correct swap out procedure. It was then fixed in 30 minutes.

Production line was still consuming energy for 4 hours. 48 tonnes of CO2 was emitted needlessly.

The Solution

With invisu the information required would have been available at the point of need providing rapid intervention.

invisu could have saved the company **3.5 hours** or a potential saving of **US \$15.8 million**.





Consultancy

Are you struggling to identify where equipment issues are occurring on your production lines?

Do you have a lack of data around your production output? and why excessive downtime is occurring?

Do you want to start the journey of digitising documents/manuals and engaging with new technology but not sure where to begin?

Our consultancy service can assist your company in identifying areas for improvement from reducing equipment downtime to lowering emissions. We can advise on how to improve efficiencies across your entire facility ranging from equipment output to staff productivity.

How It Works

- Initial meeting (complimentary)
 Discuss business goals and objectives
- Audit/review site, equipment and machinery
 Undertake factory walkthrough
- Identify areas for improvement
 Produce a report with recommendations
- Discuss the report with the client
 Propose solutions and cost savings

\$1.4 trillion

global downtime cost to the world's 500 biggest companies each year





Contact Us

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