invisu

3D DIGITAL TWIN TECHNOLOGY

For Complex Machinery and Equipment

COMPANY PROFILE

INTRODUCTION TO INVISU

invisu Ltd is a global 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 company began developing the invisu solution, a 3D interactive software (Digital Twin), in 2021 with the aim of helping users reduce unplanned downtime on physical equipment which globally now costs the world's 500 biggest companies 11% of their revenues, a total of $1.4 trillion per year).

The invisu solution is delivered to the client as Software as a Service (SaaS) on a flexible licence per user basis.

Since bringing the solution to market, the company has been selected by the government's Innovate UK to be part of two of their Advanced Manufacturing Global Incubator Programmes, shining a spotlight on new innovation in the industry, in turn taking the team on trade missions to Canada and Singapore.

The company is focused on helping businesses take initial steps to incorporate digital technology into their sites to improve efficiencies and increase profits, whilst addressing issues such as labour shortages and transfer of knowledge and skills within industry.

MANAGEMENT TEAM

Invisu's team bring together expertise from many sectors of industry

Warran Bolton

Managing Director

Background in software development and held senior management positions in financial services.

Steven Skolosdra

Technical Director

Background in aerospace engineering at BAE Systems and Rolls Royce.

Alison Bolton

Operations Director

Background in operations in financial services up to Head of Operations roles.

Amanda Barron

Business Development Director

Background in business development within various sectors of industry, including engineering.

THE INVISU SOLUTION

The invisu solution provides end-to-end life cycle care for physical equipment from assembly through to decommissioning. Users can use the solution to improve the equipment installation and qualification process.

1 **ASSEMBLY**

Manage assembly of equipment efficiently and to correct specifications.

2 **INSTALLATION**

Control complex equipment installation

3 **OPERATION**

Robust operational qualification process

4 **TRAINING**

3D interactive engineer training

5 **MAINTENANCE**

Schedule preventative maintenance
Condition based monitoring
Predictive maintenance

6 **DECOMMISSIONING**

Decommissioning of equipment
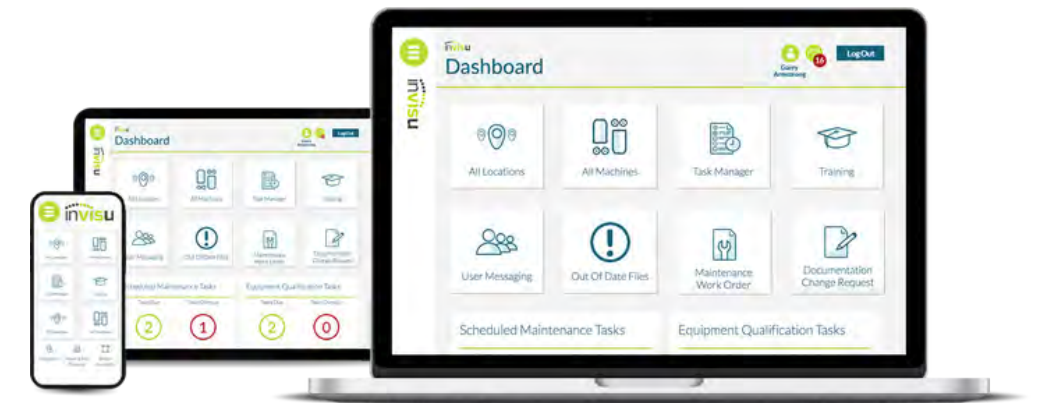
Invisu has been built in a way that makes it adaptable to be fully compatible with existing equipment and configured with other software.

**Access is available 24/7 via web browser.**

SERVICES

CONSULTANCY

Working with you to identify areas for improvement across your entire facility, ranging from reducing equipment downtime to lowering emissions, increasing equipment output and staff productivity.

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.
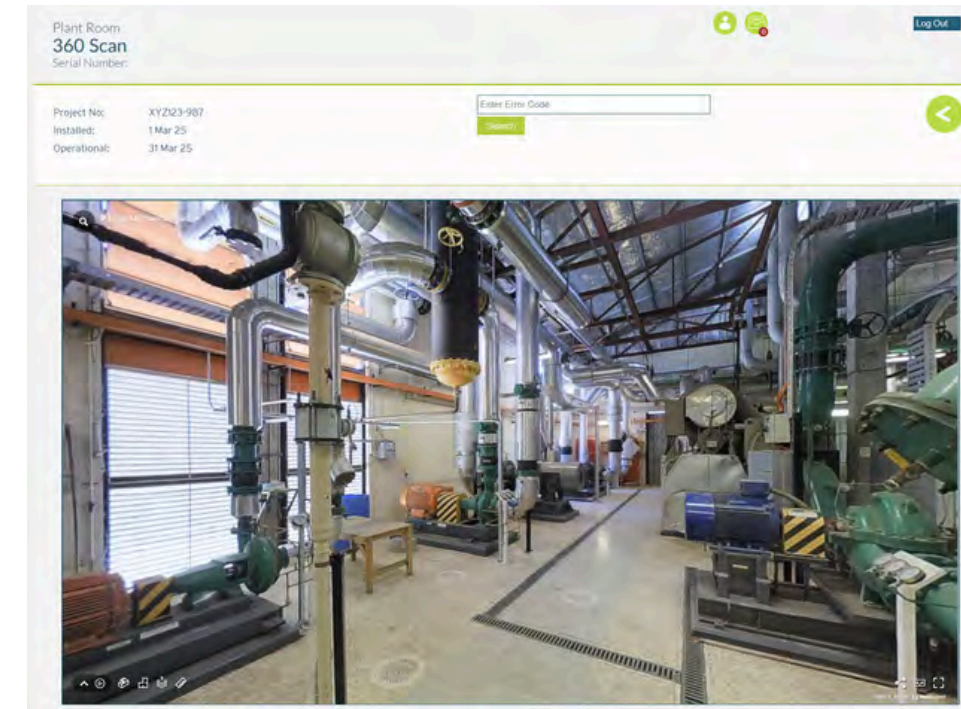
TECHNICAL & CAD AUTHORING

Turn paper-based product & machinery documentation digital! Full authoring and creation of 3D interactive documents, 360 HD scans and virtual walkthroughs.

SECTORS

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

Manufacturing Automotive Logistics & Distribution Centres Ports & Shipping Food & Beverage Pharmaceutical Airport Baggage Handling Systems (BHS) and Security

BENEFITS

1. Reduce unplanned downtime of machinery and equipment

2. Improve equipment installation and qualification process

3. Identify and rectify issues and equipment breakdowns more efficiently

4. Reduce travel costs, carbon emissions and paper wastage

5. Paper documents, such as manuals, can be digitally authored and stored securely

6. Reduce warranty claims for OEM's

7. Streamline stock management and parts ordering process

8. Obtain detailed data analytics and reports to assist financial teams

9. Improve overall service delivery for your customers

10. Employee training system ensures best practice can be shared, and installations/part replacements carried out to specification.

CASE STUDIES
AUTOMOTIVE

When an automotive manufacturer suffers unplanned downtime, lost production revenue and costs can be excessive.

During a visit to a luxury SUV manufacturer invisu witnessed an unplanned production line stoppage due to a breakdown. In this incident the production line went down for 4 hours. Invisu was invited to look at reasons and what was happening over the 4 hours.

One vehicle should have been leaving the assembly line every 80 seconds. At a unit value of around $100,000 they lost $18 million in that 4 hour period.

The actual repair only took half an hour. The previous 3.5 hours was spent trying to gather all the information to undertake the repair.

Parts indemnification, how to safely disassemble the area to gain access, how to fit the parts, how to reassemble, what tests needed to be done to qualify the work in order to make the production line live again and even identifying the engineers that were authorised to work on this area of the production line were all proving to be a problem.

With invisu, this information is available immediately at the point of need. The company could have saved 3.5 hours and $15.8 million just on this one downtime instance.

Beyond the cost, safety is compromised with passengers being at risk, along with reputational damage.

Technical staff have limited opportunity for practical hands on maintenance experience often only able to troubleshoot only when operational issues arise. Problem solving inevitably falls to the most experienced engineers so that the system is operational again as quickly as possible but this means it is difficult for less experienced staff to gain any real experience.

With the invisu training module, all staff are able to practice and take tests using customised 3D interactive scenarios, greatly increasing their confidence and ability to deal with real life situations when they occur, reducing the amount of downtime.

Using invisu vastly reduced downtime and the length of each instance. It took a reduction in downtime of just 26 minutes over a whole year to fund the use of invisu for a year, for ten users.

CASE STUDIES
CABLE CAR SYSTEM ROI

A cable car system at a popular tourist destination generates $70,000 per hour in revenue. Unplanned downtime during operating hours is costly.

PHARMACEUTICAL

Eliminating downtime is even more critical in the pharmaceutical sector as small changes in temperature and humidity can compromise the safety and sterility of products.

Downtime can have a direct effect on the supply of vaccines, antibiotics and prescription medicine impacting people's health and wellbeing. As with other sectors, pharmaceutical manufacturing downtime brings lost revenue and delays but also wasted products and a negative impact on people's health and wellbeing. The average unplanned downtime loss in the pharmaceutical sector is $500,000 per hour. Invisu can make significant reductions to unplanned downtime both by managing regular preventative maintenance and by providing rapid intervention at the point of need when sudden stoppages occur. The 3D interactive images enable maintenance engineers to quickly identify the parts that are needed and then disassemble and reassemble the machine with minimum disruption.

EQUIPMENT MANUFACTURERS

The risk of warranty claims for Original Equipment Manufacturers is increased if there is not a documented audit trail from installation to maintenance. One of our clients had issues with their machines being installed by third parties and then maintained (or not) by the end user. They saw an increase in warranty claims as a result.

By using invisu, they mitigated for this risk and greatly reduced the number of warranty claims. Their equipment was shipped with invisu as standard so the installation of the machine was recorded using the installation qualification on invisu and then any future maintenance by the end user was also recorded on invisu giving a full audit trail for both sides. This resulted in greater customer satisfaction, more robust service contracts and also gave our client a way to stand out from their competition.

AIRPORT BAGGAGE HANDLING SYSTEM

When a baggage handling system (BHS) goes down it affects the entire airport operation and can have knock on consequences for airlines. Everything from air traffic control to retail and cleaning are affected.

At a large airport a 1 hour stoppage can result in a backlog of 18,000 bags. Clearing this backlog while more bags are arriving becomes a challenge that can slow airport functions for the rest of the day. With invisu, instance quantity and length can be significantly reduced.

CONTACT US

Head Office - United Kingdom

📞 +44 1204-326-280

🌐 www.invisu.uk

✉️ info@invisu.uk

📍 1 Belmont House, Deakins Business Park, Egerton, Bolton, BL7 9RP