

Integrated solutions for complex plants and projects



ABOUT US

3Units is an engineering company based in Chiasso, operating in both Switzerland and Italy. Our multidisciplinary team brings together 3D design, engineering analysis, maintenance and software development – providing innovative and tailor-made solutions for the industrial sector.

Our approach combines solid engineering expertise with the use of advanced technologies. We believe collaboration is the driving force of progress: that's why we build strong relationships with partners and clients, always aiming for quality and transparency.

We offer integrated engineering services — from design to plant management — ensuring quality, innovation and safety at every stage.

✓ Flexibility

We adapt schedules and workflows to the specific requirements of each project, keeping margins of error to a minimum.

[Dedicated project management](#)

✓ Partnership

We collaborate with technology leaders such as Hexagon AB to provide reliable, scalable and constantly updated solutions.

[Network with industry leaders](#)

✓ Experience

Over twenty years of expertise enable us to manage complex projects across multiple industrial sectors with confidence.

[Over 20 years of experience](#)

✓ Completeness

We support clients throughout every stage — from concept design to operational and maintenance management.

[From concept to maintenance](#)



From 3D modelling to BIM design: complete solutions for complex industrial plants.

DESIGN, STRUCTURES, SAFETY

We develop plant and structural engineering projects by integrating mechanical, electrical and automation expertise. Our approach combines extensive engineering experience with world-class software to ensure top quality and full regulatory compliance.

We support our clients through every project stage — from feasibility to execution — providing continuous monitoring of time, cost and quality. Our experience allows us to manage projects of varying scale and complexity, adapting to the needs of each sector.





OUR MAIN AREAS OF EXPERTISE INCLUDE:

✓ 3D modelling

We create detailed digital models that minimise design errors and speed up overall project development.

[Digital design](#)

✓ Mechanical design

We deliver structural and mechanical solutions for machinery and industrial plants, focusing on strength and efficiency.

[Structural solutions](#)

✓ Fire protection

We design systems compliant with international standards, integrated with electrical systems to guarantee maximum safety.

[Certified protection](#)

✓ Supervision

We manage time, cost and quality through continuous monitoring, ensuring high standards and minimising downtime risks.

[Constant control](#)



Stress analysis and structural verification for safe, reliable plants.

SIMULATION, PRECISION, RELIABILITY

We provide advanced engineering analysis services to prevent structural issues and ensure maximum reliability. Using FEM methods and specialised software, we assess materials and structures to support clients in the energy, chemical and oil & gas industries.

Our long-standing experience enables us to deliver tailored solutions, even for complex systems. Every analysis is designed to improve plant durability and guarantee compliance with international standards.

ANALYSIS ENGINEERING

OUR MAIN SERVICES INCLUDE:

✓ Stress analysis

We assess stress conditions in materials and structures to identify potential weaknesses and prevent future failures.

[Structural analysis](#)

✓ CFD

We apply advanced computational fluid dynamics to optimise thermal comfort, energy efficiency and safety in industrial environments.

[Advanced simulation](#)

✓ Pressure vessels

We perform precise calculations for tanks and equipment according to international codes, ensuring safety and long-term performance.

[Accurate calculation](#)

✓ Piping and supports

We carry out detailed checks to enhance stability and ensure continuous plant operation.

[Reliable verification](#)



Maintenance and digitalisation for efficient, future-ready plants.

MANAGEMENT, MONITORING, OPTIMISATION

We help companies improve performance and reduce downtime through integrated solutions for maintenance and asset management. Our customised approach enhances efficiency, safety and cost control across all operational phases.

Through the digitalisation of industrial systems and the introduction of real-time monitoring, we enable companies to transform data into valuable, actionable insights. This allows for smarter and safer management of industrial plants.





OUR SERVICES INCLUDE:

✓ Maintenance

We develop preventive and corrective strategies to extend plant life and reduce operational costs.

[Operational efficiency](#)

✓ Digitalisation

We implement solutions for real-time control and monitoring, reducing failures and downtime.

[Instant control](#)

✓ RAM/RCM analysis

We apply proven reliability methods to maximise availability and performance across all systems.

[Guaranteed reliability](#)

✓ Tailored solutions

Each project is customised to fit the client's specific industrial context and operational needs.

[Custom approach](#)

High-precision 3D surveying for the digitalisation of industrial assets.

ACCURACY, TECHNOLOGY, DETAIL

We use laser scanning technology to create precise 3D models of plants, structures and complex industrial components. This advanced technique provides millimetre accuracy, forming a solid foundation for design, maintenance and digital asset management.

The data collected form a solid foundation for precise interventions and the creation of digital twins. These increasingly common tools in industry support reliable decision-making and advanced plant management.





OUR MAIN APPLICATIONS INCLUDE:

✓ Point clouds

We generate high-density 3D point clouds that allow accurate, error-free project simulations.

[Digital models](#)

✓ Deformation analysis

We monitor tanks, pipelines and structures to ensure stability, safety and regulatory compliance.

[Structural control](#)

✓ Digitalisation

We convert plants and assets into detailed digital models for maintenance and modification purposes.

[Virtual assets](#)

✓ CAD/BIM & VR

We integrate data into CAD/BIM and virtual reality environments for design, training and operational simulation.

[Immersive design](#)



Specialised expertise and training for industrial excellence.

SKILLS, METHODS, INNOVATION

We help companies strengthen their technical expertise and optimise industrial processes. From Hexagon software to industrial BIM and integrated management systems, our training programmes are designed to support long-term growth and continuous improvement.

Our training and consulting paths are built around the real needs of each organisation. We offer customised programmes that deliver tangible results — practical, immediately applicable and valuable for future development.



OUR AREAS OF EXPERTISE INCLUDE:

✓ Training

We deliver targeted courses that enable professionals to make the most of specialised software and methodologies.

[Focused training](#)

✓ BIM consulting

We provide technical support to enhance digital model management and operational efficiency.

[Technical support](#)

✓ Integrated systems

We implement management systems compliant with international standards in quality, safety and energy.

[Compliant management](#)

✓ Audits

We conduct detailed assessments of maintenance and energy efficiency to identify critical areas and reduce costs.

[Targeted analysis](#)

Let's design the future
of your business together.

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