

DESIGN & CONSULTING



First of all there is a dream,
the dream to build something that will be
immortal and that leaves the footsteps of his
own passage.

This dream, started some years ago,
It's called **CS engineering FZCO** and today it's shared
by people that believe in their work.

A beautiful dream mixed with passion and a lot of work
are the secrets for success.

We keep dreaming.

The founder
Carmine Spiaggia



CS Engineering FZCO



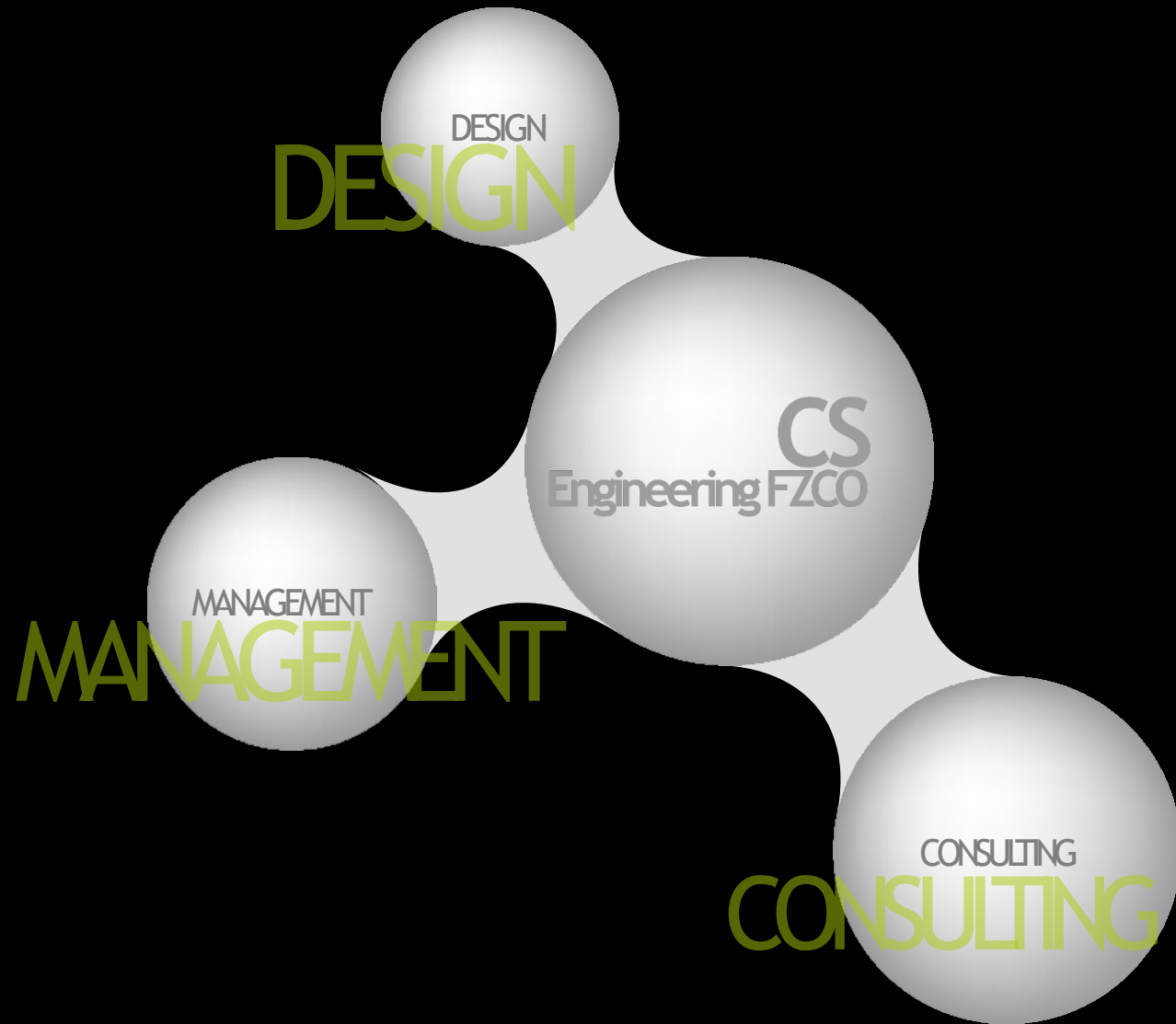
CS ENGINEERING **FZCO** is a company borned in DUBAI in 2023 that offer design and consulting services in the civil and industrial sector.

Organisational, competence and innovation are the words that better describe the principles on which our business is based .

30 years of experience in Italy about design and consulting.

More than **300 project realised** by founder.

360°



SERVICE OVERVIEW

MULTIDISCIPLINARI

DESIGN

- FEASIBILITY STUDIES
- CONCEPT DESIGN
- BASIC DESIGN
- PRELIMINARY DESIGN
- DETAIL DESIGN
- CONSTRUCTION DESIGN
- FRONT AND DESIGN
- SHOP DRAWINGS
- BIM DESIGN
- COUNTRY SPECIFIC DESIGN ADAPTATION

MANAGEMENT

- PROGRAM MANAGEMENT
- PROJECT MANAGEMENT
- CONSTRUCTION MANAGEMENT
- DESIGN MANAGEMENT
- OPERATION & MAINTENANCE MANAGEMENT
- ENERGY MANAGEMENT
- SAFETY MANAGEMENT
- PROCUREMENT MANAGEMENT

CONSULTING

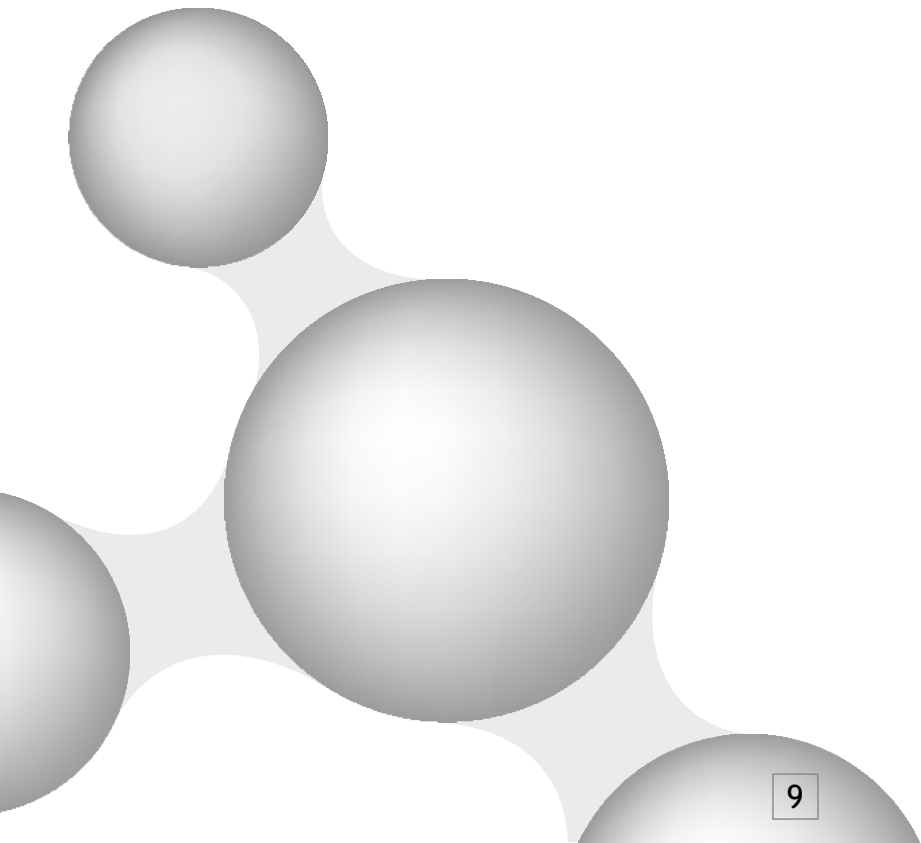
- DUE DILIGENCES
- SITE AUDITS
- SURVEYS
- DESIGN AUDITS
- VALUE ENGINEERING & CONSTRUCTABILITY
- LEED ENGINEERING
- RISK ANALYSIS
- ENERGY & GREEN CONSULTING
- LEAN ENGINEERING
- COMMISSIONING
- FIRE-FIGHTING CONSULTING
- NOISE CONSULTING
- TRAINING SERVICES
- LASER SCANNING
- PROJECT PLANNING
- ERECTION SUPERVISION
- EXPEDITING AND INSPECTION
- SUPPORT TO PROCUREMENT
- PROJECT MANAGEMENT CONSULTING

CS ENGINEERING FZCO

design & consulting

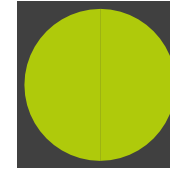
CS engineering FZCO

DUBAI



PROPERTY

WORLD
CS engineering FZCO



Carmine
Spiegia

WORLDWIDE

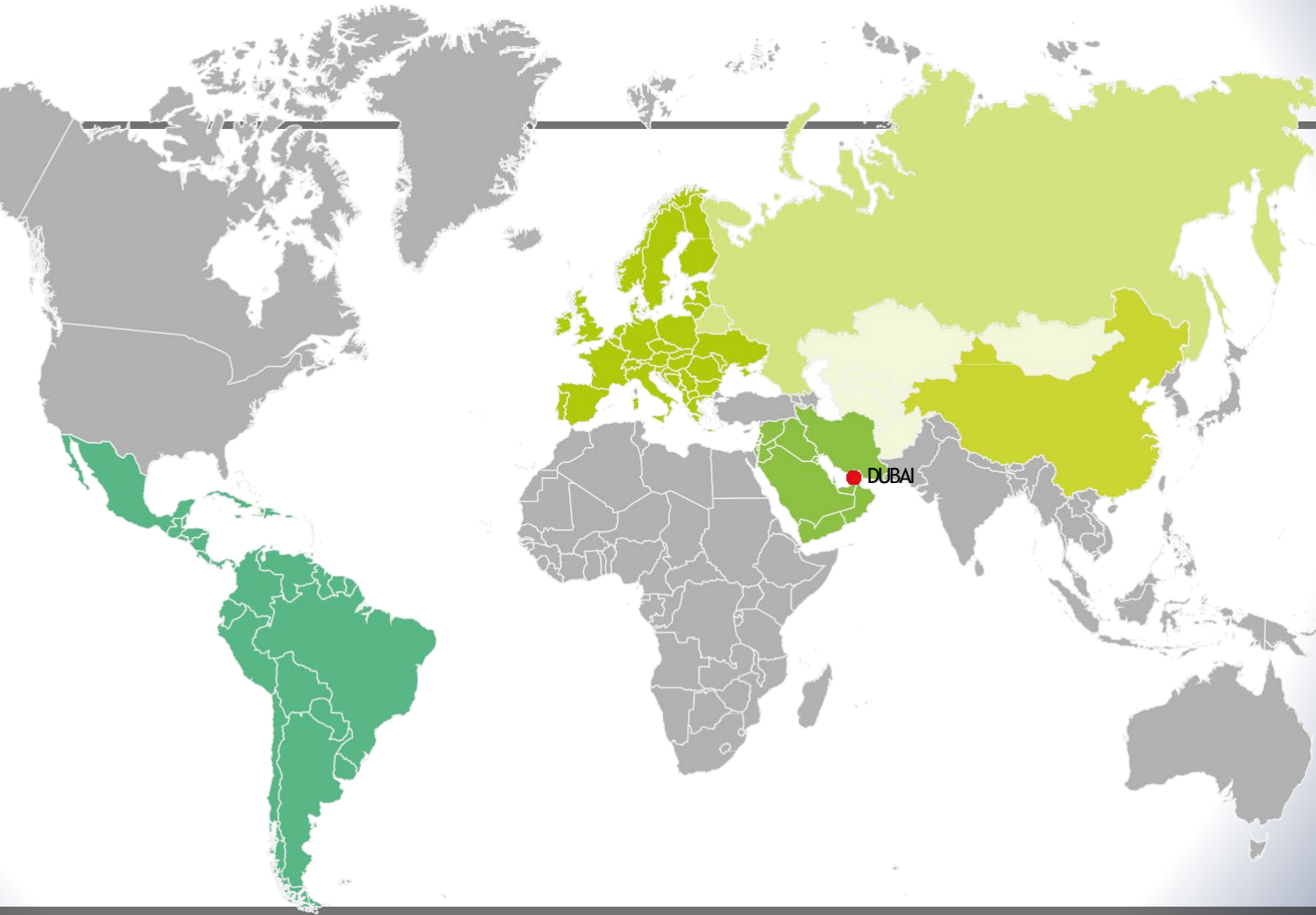
CS engineering FZCO desires to operate with the belief that its market is the world.

Thanks to the many assignments, CS engineering FCZO lays the foundation of its development.

The belief that new markets develop only by taking root in the territory, it leads to the opening of CS engineering FCZO in DUBAI UAE.



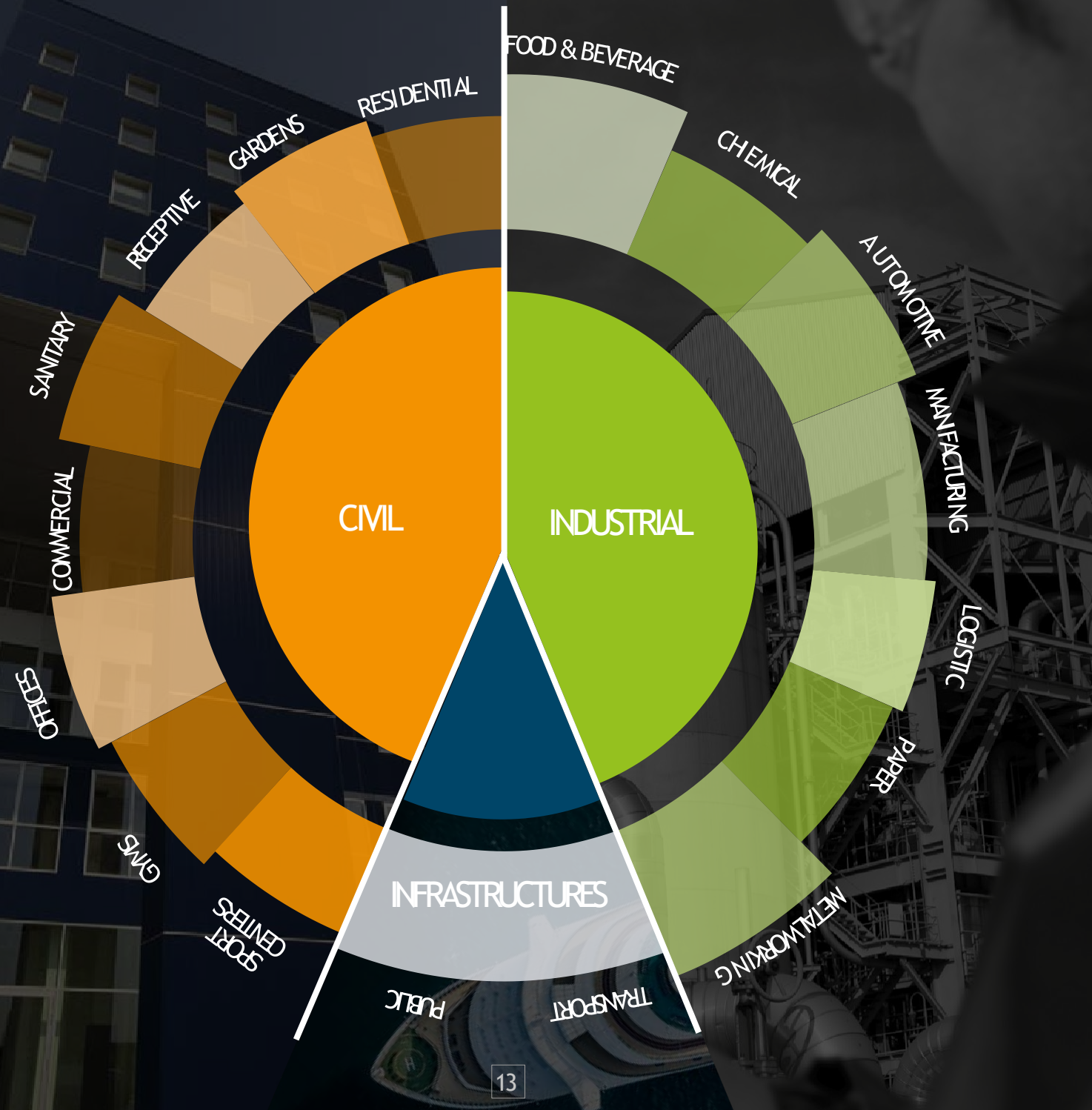
EVERY YEAR WE WANT TO GO **AROUND THE WORLD 50 TIMES** TO REACH OUR CUSTOMERS



OVER 300 COMMISSIONED PROJECTS

2 PRODUCTION SITES
IN 2 DIFFERENT CONTINENTS

LEGEND
● CS engineering FCZO sites



ACTIVITY SECTORS

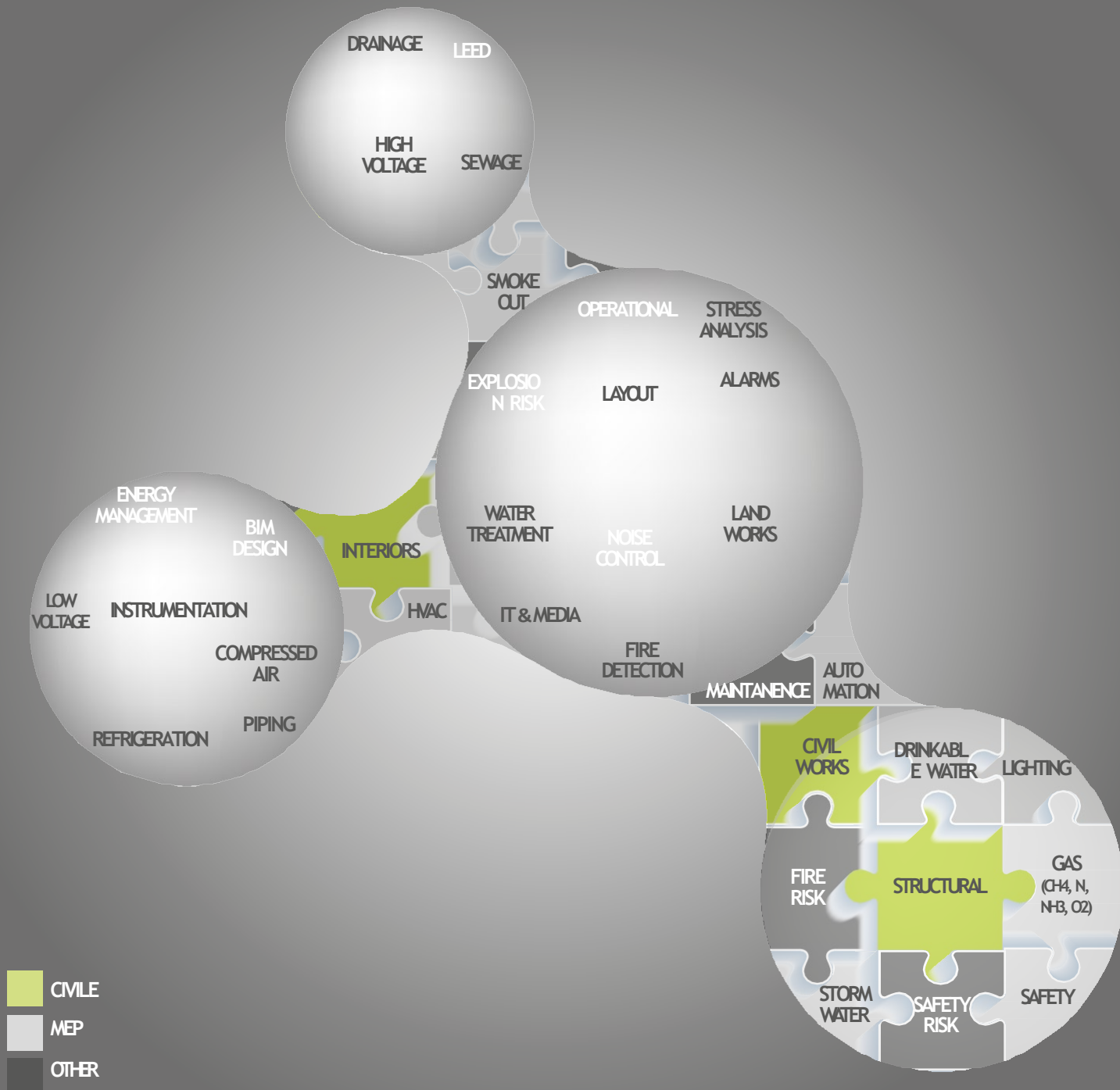
CS engineering FCZO operates with a single organization in three operating fields:

CIVIL INFRASTRUCTURES INDUSTRIAL

Sectors differ in terms of culture, approach and objectives but they are also united by transversal technical skills and unexpected affinities of interest.

The exchange of different specificities often proved to be the trump card to improve the quality of the service offered.





- CIVILE
- MEP
- OTHER

SKILLS

CML

AREAS

- > Street
- > Parking
- > Green areas

BUILDINGS

- > Civil
- > Industrial
- > Technological

TECHNOLOGICAL STRUCTURES

- > Piping rack
- > Platforms
- > Skids

RISK

- > Noise
- > Explosion
- > Environmental

PROCESSES

- > Technological
- > Productive
- > Logistic

OPERATION

- > Improvement
- > Development
- > Unkeep

SAFETY

- > Construction sites
- > Machine
- > Processes

ENERGY

- > Traditional sources
- > Renewable sources
- > Energy efficiency

MEP

ELECTRICS

- > High Tension voltage
- > Medium voltage
- > Low voltage

SAFETY

- > Firefighting
- > Intraction
- > Access controll
- > Video check

TELECOMMUNICATION

- > Data network
- > Telephony

MECHANICS

- > Water and drains
- > Air conditioning ventilation
- > Refrigeration
- > Gas
- > Process' Piping

COMPLEMENTARYS

- > Sound Diffusion
- > Lighting
- > Domotics

AUTOMATION AND SUPERVISION

- > Buildings
- > Machine
- > Processes



TECHNICAL COMPETENCE AND INNOVATION FUT

3D
VISWORKS
AUTOCAD

ESAPRO 3D PIPING

AUTODESK INVENTOR

DYNAMO

REVIT

BENTLEY MICROSTATION



FUTURE IS NOW

SKILLS

- 1) Civil works
- 2) Structures
- 3) Mep
- 4) Piping
- 5) Instrumentation and automation
- 6) Green Tecnology
- 7) Lighting
- 8) Civil and technological surveys



CIVIL WORKS

Design and consultancy services about civil works carried out by architect and engineers' team highly skilled that works in two ways:

- Independently
- in collaboration with other engineering and architecture companies

Design of spaces and solutions, choice of materials and technologies, cost control, consultancy in the purchase and construction phases are the services that **CS engineering FCZO** can offer.



INFRASTRUCTURES:

- earth movements and consolidations
- roads and ways of communication
- Parking
- equipped and green areas

BUILDINGS

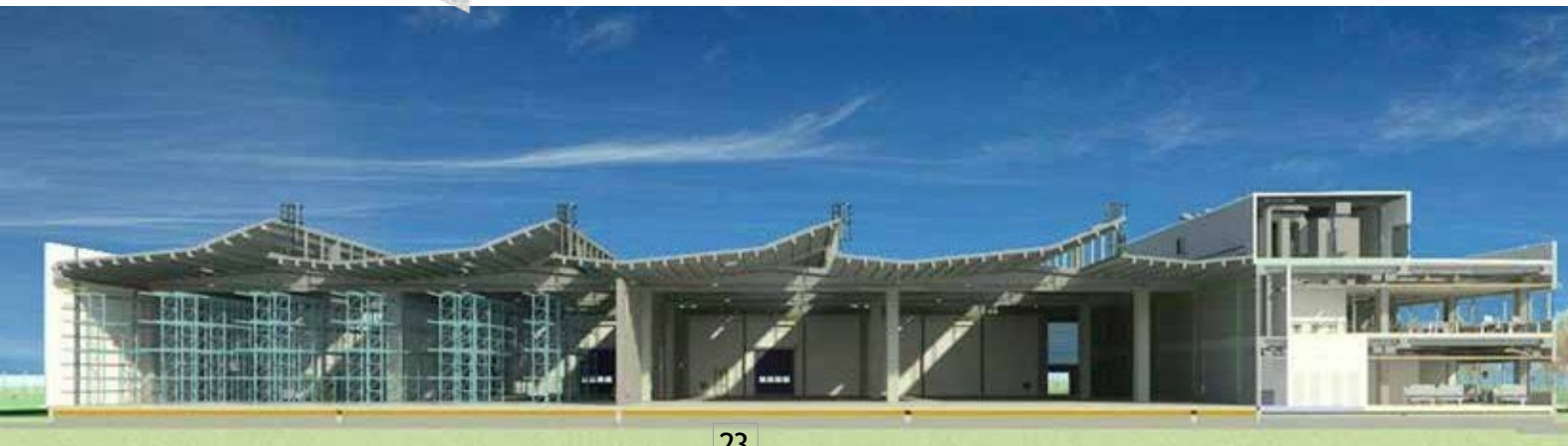
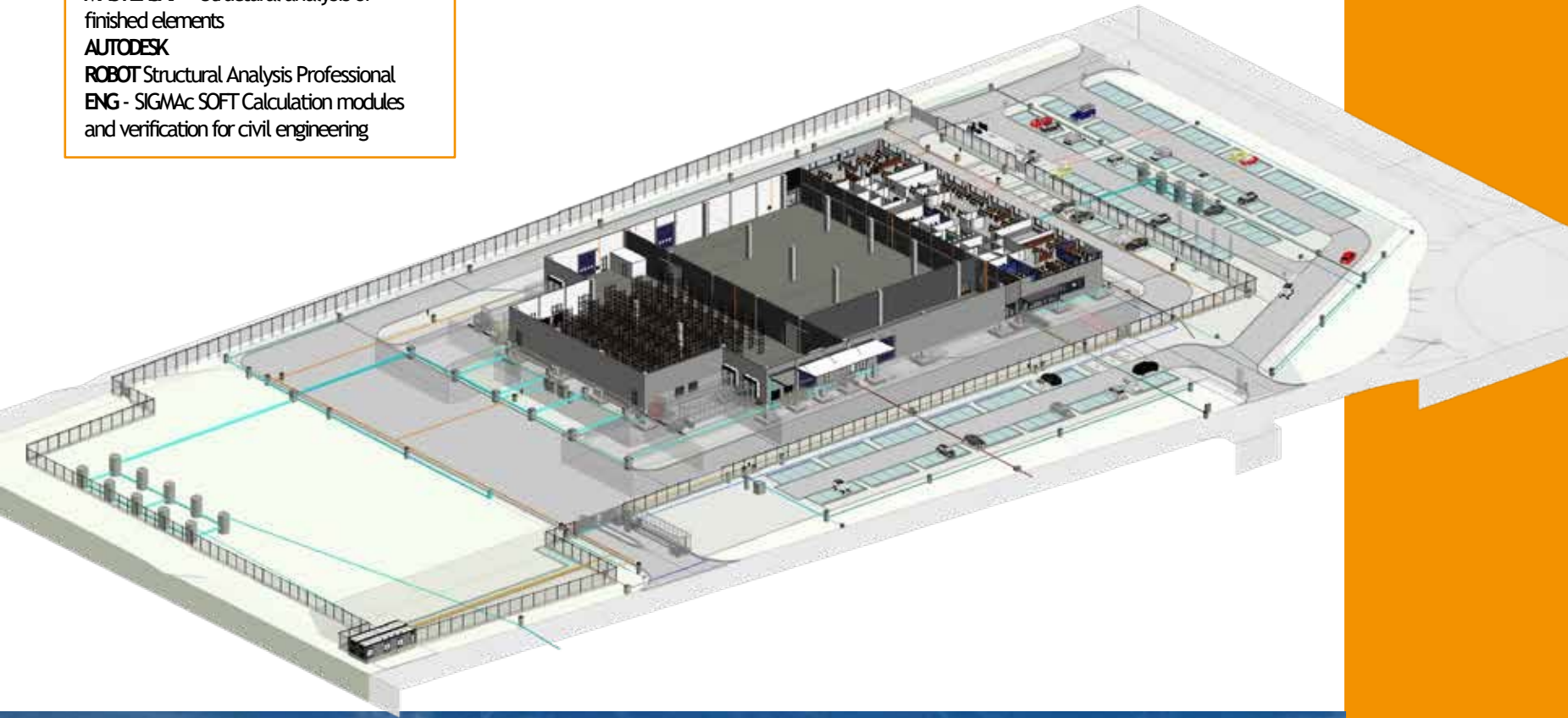
- Layout
- basements and foundations
- Elevation and repartition
- attics and roofs
- Covering and facades
- Doors and windows
- Stairs, ramps, elevators
- Ceilings and false ceilings
- Floors and walls

TECHNOLOGICAL

- Layout
- Tunnel
- Foundations and technological bases
- Support and fixing structures
- Stairs and maintenance walkways

SOFTWARE

AMV Software Company
MASTERSAP - Structural analysis of finished elements
AUTODESK
ROBOT Structural Analysis Professional
ENG - SIGMAc SOFT Calculation modules and verification for civil engineering



02 STRUCTURES

STRUCTURES

Structural design is the technical link between civil and plant engineering works and therefore in CS engineering FCZO represents a synergistic competence with the aim of providing the customer with Solutions Integrated Techniques.

Engineering's team uses calculation's software, for dimensioning structures both in static and dynamic conditions.

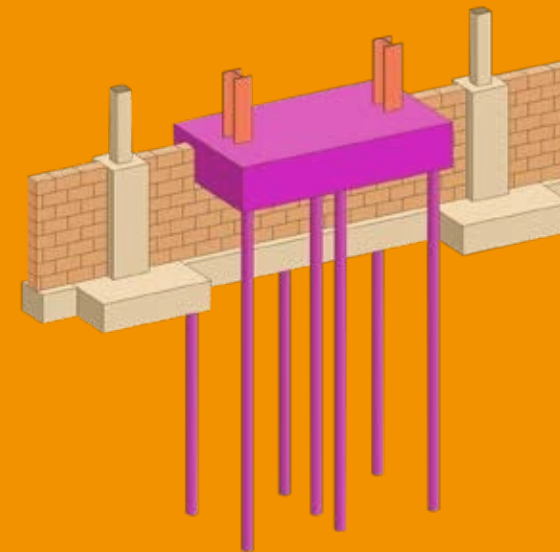
The Structural team of CS engineering FCZO is able to design:

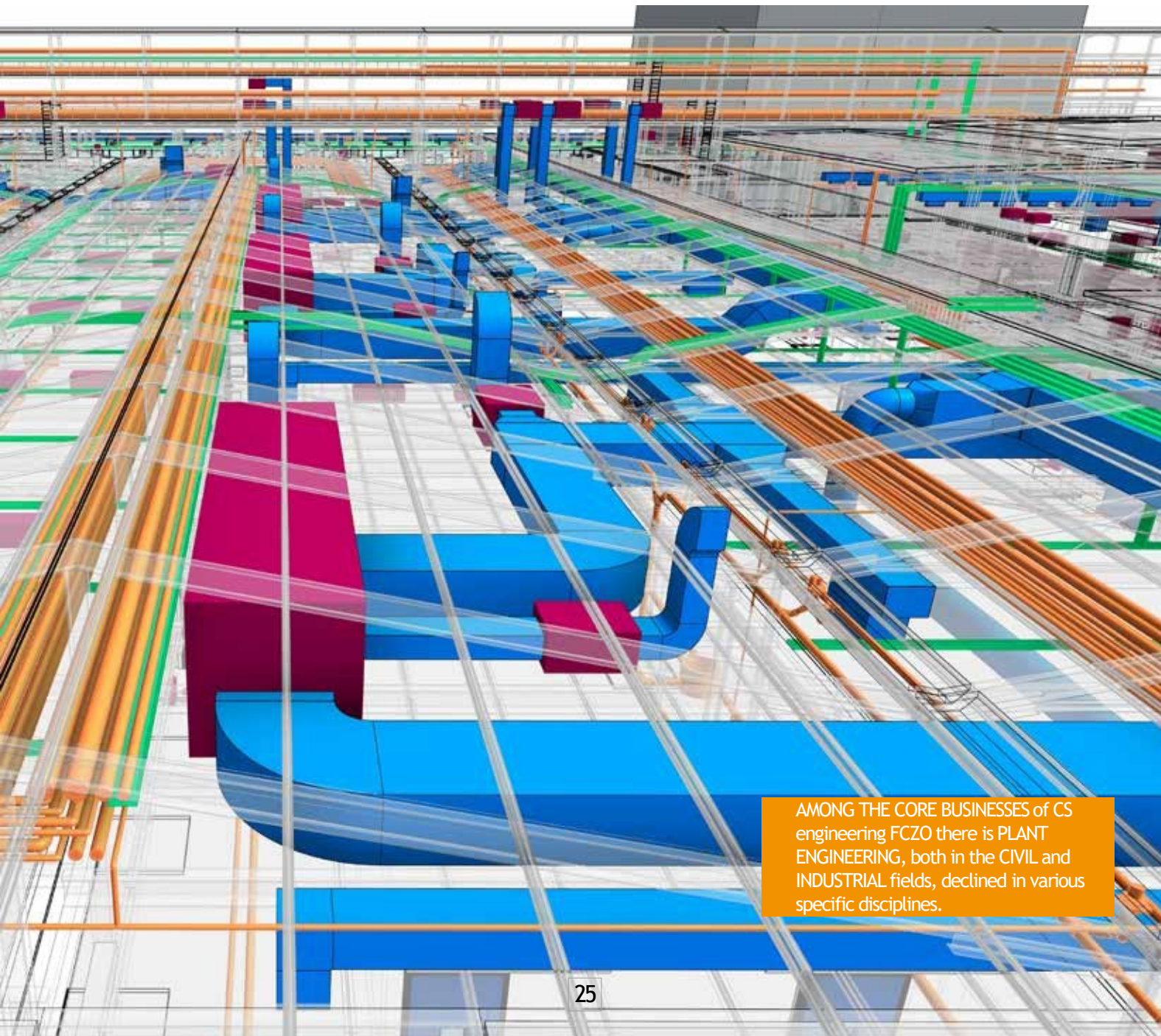
- Iron structures
- Reinforced concrete structures
- Wooden structures

In addition to the structural design of **CIVIL AND INDUSTRIAL BUILDINGS**, CS engineering FCZO is specialized in the design of structures serving technological and process systems, such as:

- Pipe Racks
- Elevated platforms
- Basements and foundations for equipment
- Supports for pipes and systems in general
- Lifting and anchoring systems for transport

CS engineering FCZO's president has a lot of years of experience in the design of structures with high **SEISMIC** risk.





AMONG THE CORE BUSINESSES of CS engineering FCZO there is PLANT ENGINEERING, both in the CIVIL and INDUSTRIAL fields, declined in various specific disciplines.

MEP MECHANICAL

AIR CONDITIONING (HVAC):

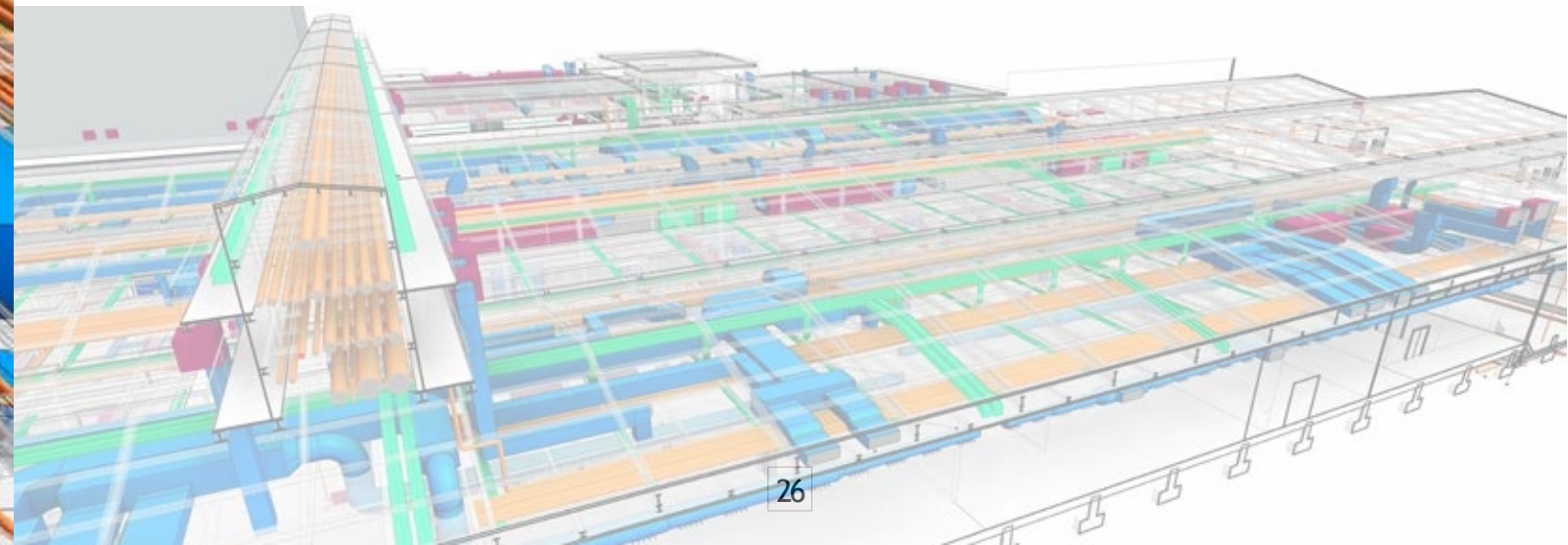
- radiant systems (radiators, floors or ceilings);
- air systems (fan coils, chilled beams and/or air handling units)
- Steam production and transportation plants (industrial).
- hydrocarbon or biomass plants,
- heat pumps,
- solar collectors,
- cogeneration and tri-generation plants,
- geothermal probes.

INDUSTRIAL REFRIGERATION

- Industrial cooling systems (gas, glycol),
- Industrial freezing systems (ammonia, carbon dioxide)

PROCESS GAS

- Plants for the production and transport of compressed air
- Gas production and transport plants (oxygen, nitrogen, air)
- Transport and treatment systems for gases and combustible fluids (methane, LPG, diesel, solvents)



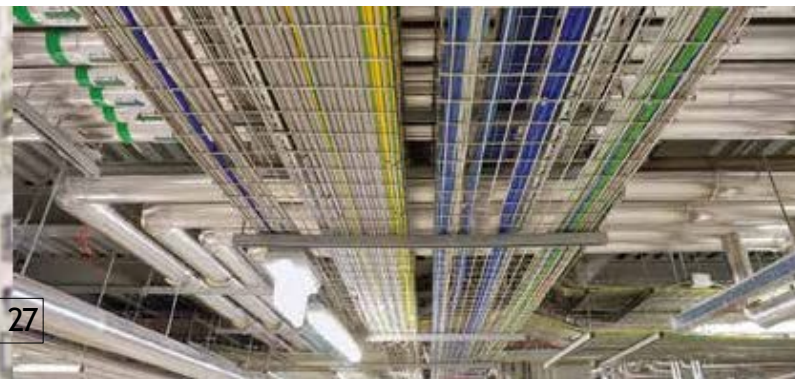
MEP ELECTRIC

HIGH VOLTAGE, MEDIUM VOLTAGE, LOW VOLTAGE

Generation plants
 Processing plants
 Distribution networks
 Electrical distribution and command panels and automation
 Protection systems against atmospheric discharges
 Grounding systems

Special installations:

- fire detection and alarm systems
- gas detection and alarm systems
- public address systems
- access control systems
- anti-intrusion systems
- video surveillance systems
- hospital communication systems



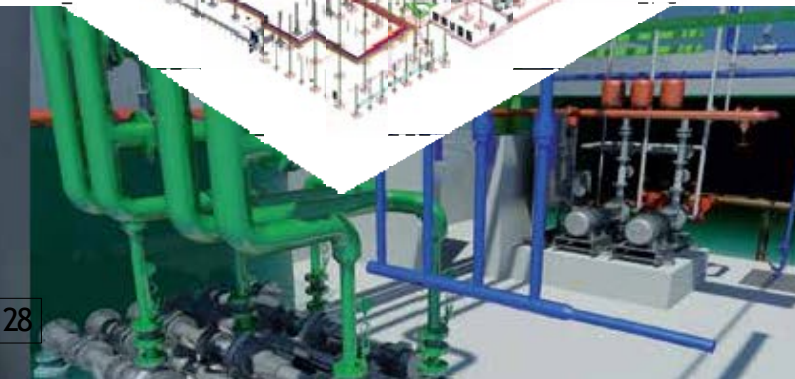
MEP PLUMBING

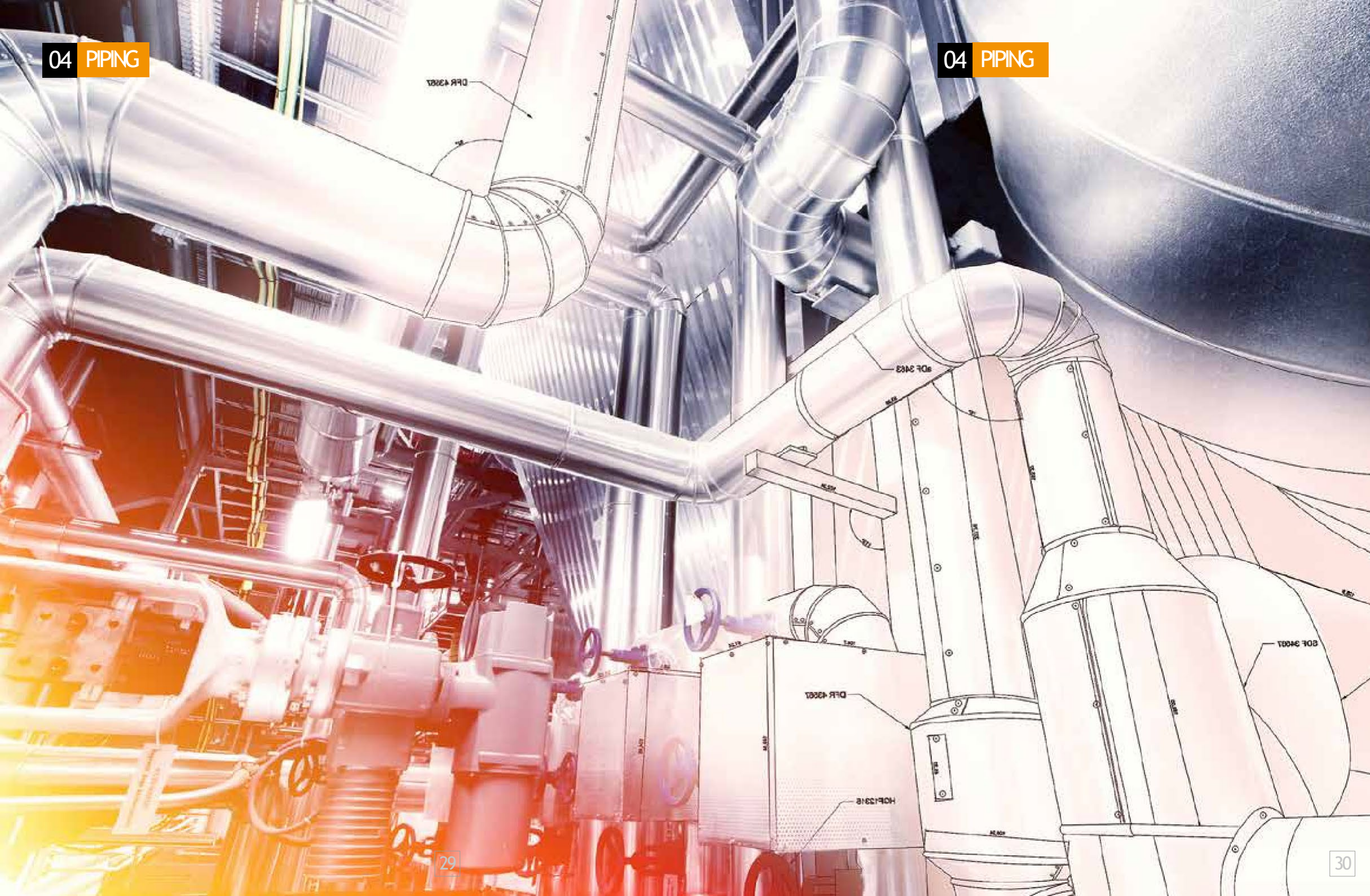
WATER AND DRAINAGES

- Production plants, purification, treatment and conditioning of hot and cold sanitary water (civil and industrial)
- desalination plants
- Drainage systems for both civil and process (industrial) water
- Treatment plants, oil removal and purification of both civil and process (industrial) wastewater
- Rainwater collection, conveyance, treatment and discharge systems

FIREFIGHTING

- Pressurization stations
- water extinguishing systems
- Rain extinguishing systems
- Fog extinguishing systems
- gas extinguishing systems
- Smoke and heat evacuation systems.





3D MODELING

CS engineering FCZO uses INNOVATIVE modeling tools and HIGHLY PERFORMING.

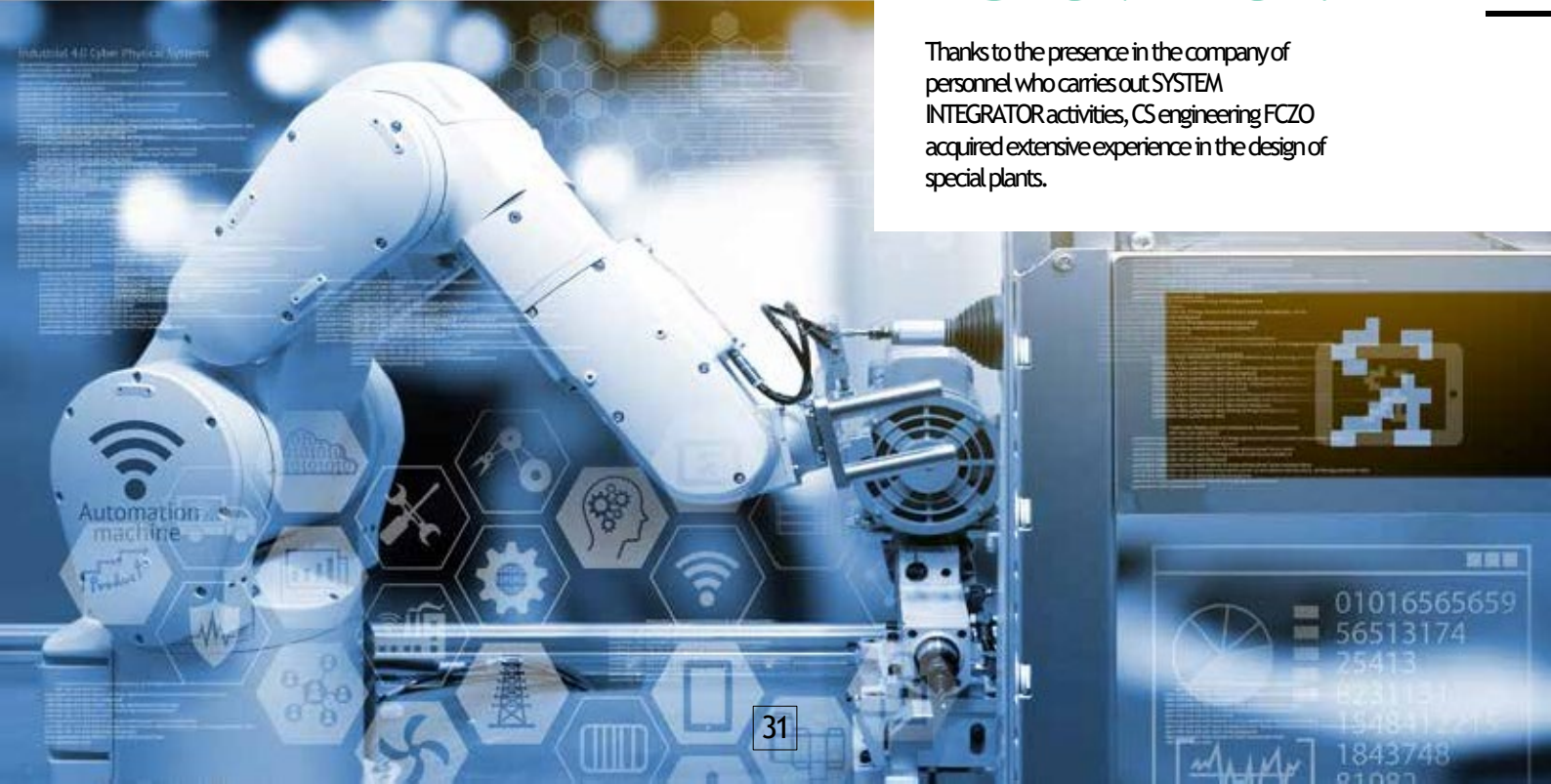
3D MODEL is able to realise realistic demonstration of a project, as well as the impact of some modification with IMMEDIATE and EASY TO UNDERSTAND IMAGES, allowing:

- 360° VIEWS of project models
- Simplified PROJECT PROGRESS ANALYSIS
- animated WALK-THROUGH
- INTERDISCIPLINARITY
- MORE IMMEDIATE INTERFACE
- MODEL REVIEW with the Client
- Detection of INTERFERENCES
- Analysis of OPERATING SPACES, MAINTENANCE and HANDLING
- Integrated DATABASE management
- Management of materials and construction phases
- detailed MTO (Material Take Off)



INSTRUMENTATION AND AUTOMATION

Thanks to the presence in the company of personnel who carries out SYSTEM INTEGRATOR activities, CS engineering FCZO acquired extensive experience in the design of special plants.



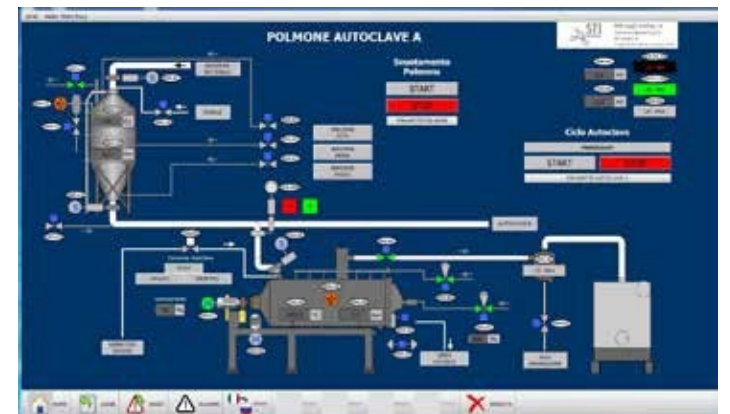
AUTOMATION AND CIVIL SUPERVISION

BUILDING AUTOMATION at the service of SAFETY, COMFORT and ENERGY SAVING. CS engineering FCZO has extensive experiences with all the technologies present in the world of BUILDING AUTOMATION, both in the civil SMART HOUSE field in the DIRECTIONAL and COMMERCIAL one.



AUTOMATION OF MACHINERY, PLANT AND PROCESSES, INDUSTRIAL SUPERVISION

To IMPROVE THE LIFE OF WORKERS, TO REDUCE THE RISKS of production, TO INCREASE PRODUCTIVITY, TO GUARANTEE THE homogeneous QUALITY of the product. In short, INCREASE YOUR PROFIT. From PROCESS ANALYSIS, to DEFINITION OF THE HARDWARE PART, to SOFTWARE DEVELOPMENT. From simple PLC programmable logic systems to the most complex SCADA and DCS systems



GREEN TECHNOLOGY

For over 25 years CS engineering FCZO has been a leader in the design of systems that uses HIGHLY ENVIRONMENTALLY COMPATIBLE ENERGY SOURCES and LOW ENERGY CONSUMPTION TECHNOLOGIES.

Supporters of the CASACLIMA PROJECT and promoters of LEED standards (Leadership in Energy and Environmental Design), our approach to plant design always takes place with respect for nature and in the search for solutions derived from the use of ALTERNATIVE, RENEWABLE and SUSTAINABLE ENERGY SOURCES, such as

- **SOLAR** plants and systems
- **PHOTOVOLTAIC** systems
- **WIND** farms
- **GEOTHERMAL** installations
- **BIOMASS** plants
- **COGENERATION** plants
- **TRIGENERATION** plants
- **HYDROELECTRIC** plants



LIGHTING DESIGN

takes inspiration from the analysis of different aspects and parameters. it is often governed by STANDARDS, other times it is the result of PURE CREATIVITY, therefore it is a SYMBIOSIS OF LIGHTING TECHNOLOGY, INSPIRATION, EXPERIENCE AND GOODSENSE, all connected to vision individual of light.

The correct and rational union of all these elements leads to the development of a LIGHTING CONCEPT DESIGN and subsequently to the selection of LIGHTING EQUIPMENT, related OPTICS and SOURCES BRIGHT to use.

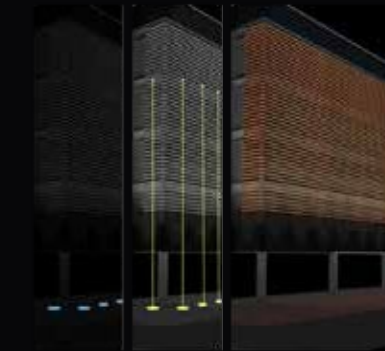


TECHNICAL APPROACH

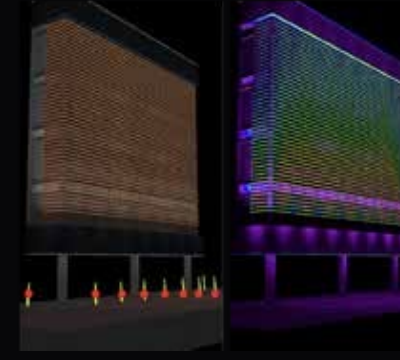
*terracotta shading



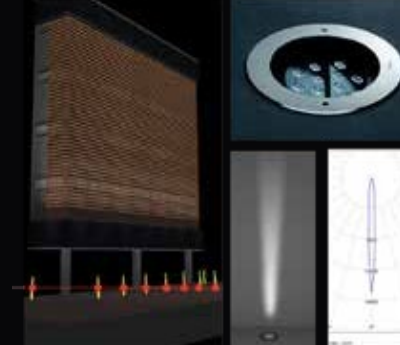
sources pointing result



sources type luminance



sources type



The lighting design must be developed in such a way as to be able to guarantee SAFETY and the VISUAL WELL-BEING of the users, providing an adequate quantity of LIGHT FLOW and creating the lighting conditions such that the activities can be carried out in the most efficient and comfortable way possible.

The choice of systems and LIGHTING EQUIPMENT, the PHOTOMETRIC DISTRIBUTION, the TONE OF THE LIGHT and consequently, the lighting solutions adopted must be made considering the technologies and materials used, with the aim of guaranteeing COMFORT, ENERGY SAVING, FLEXIBILITY and also SIMPLICITY OF INSTALLATION, MANAGEMENT and MAINTENANCE.

SOFTWARE



CIVIL AND TECHNOLOGICAL RELEASES



CS engineering FCZO offers survey and return services in the civil and technological fields with
LASER SCANNING
GEORADAR
ADDITIONAL SERVICES

LASER TECHNOLOGY consists of specific and cutting-edge hardware and software that allow:

- Speed and efficiency of data acquisition
- Completeness Remote survey
- Speed
- Accuracy
- Instant 3D data
- Relief in extreme lighting conditions

APPLICATIONS IN THE CIVIL SECTOR

- . Civil structures
- . Urban centers
- . Cultural heritage
- . Roads and infrastructure
- . Environment

APPLICATIONS IN THE INDUSTRIAL SECTOR

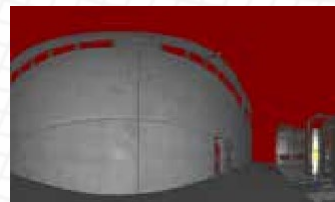
- . Revamping and plant modifications
- . Plant relocation
- . Offshore work
- . Constructability studies

→
FROM TECHNOLOGICAL SURVEY TO RETURN

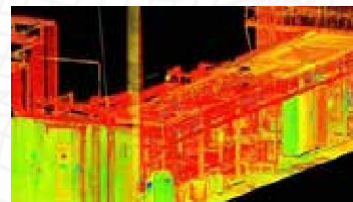
1
 SURVEY ON SITE WITH LASER SCANNER



2
 VISUALIZATION IN 3D VIEW MODE



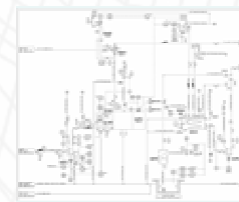
3
 EXTRAPOLATION OF POINT CLOUD



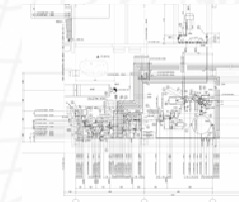
4
 MODELING 3D



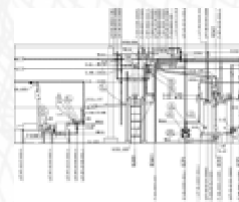
5
 DRAWING P&ID



6
 PLANTS DRAWING

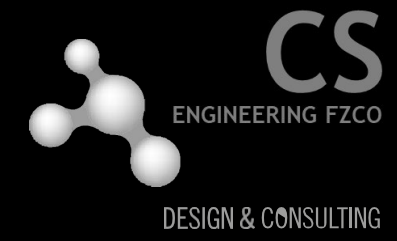


7
 SECTION DRAWING



8
 IMMERSIVE REALITY





SITUATED

CS engineering FZCO

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