



We Design The Change





ABOUT US

Ethos technology Srl is an engineering consulting Company which support its costumers by providing technical expertise and helping them in their innovation and transformation processes.

Ethos supports its customers in each phase of product development and alongside its life cycle. The scientific method is assisted by an ecosystem approach, able to analyse the whole process, considering every interaction among the components, focusing on more responsible and sustainable development as “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs”





OUR SERVICES

Ethos Technology operates on two Business lines tightly connected: Product & Process Engineering, Integrated Services for Industrial Sustainability Management



ELECTRICAL & HW/SW DESIGN



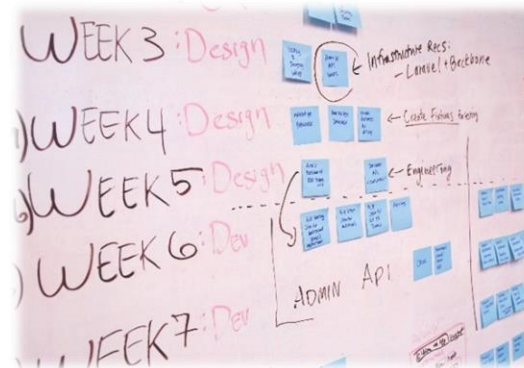
INNOVATION & DIGITAL TRANSFORMATION

TYPE OF CONSEQUENCE	Consequence				
	No. Min. (hours)	Days	Days of operation	Days of absence	Days of absence
P - Production Loss / Business Risk	100000	100000	100000	100000	100000
F - Financial Loss / Capital Asset	100000	100000	100000	100000	100000
Probability	1	2	3	4	5
Improbable Never heard of in Oil & Gas Industry; 1x10 ⁻⁴ Mean time to failure => 10,000 years	L	L	L	L	M
Remote Has occurred in Oil & Gas Industry; 1x10 ⁻³ Mean time to failure => 1,000 years	L	L	M	M	M
Occasional Has been experienced by most operators; 1x10 ⁻² ; Mean time to failure => 100 years	L	M	M	H	H
Probable Happens several times per year, per operator 1x10 ⁻¹ ; Mean time to failure => 10 years	L	M	H	H	H
Frequent Happens several times per year, per facility 1x10 ⁰ ; Mean time to failure => 1 year	M	M	H	H	H

FMECA/DFMEA – RELIABILITY & SAFETY ANALYSIS



PRODUCT AND PROCESS MECHANICAL ENGINEERING



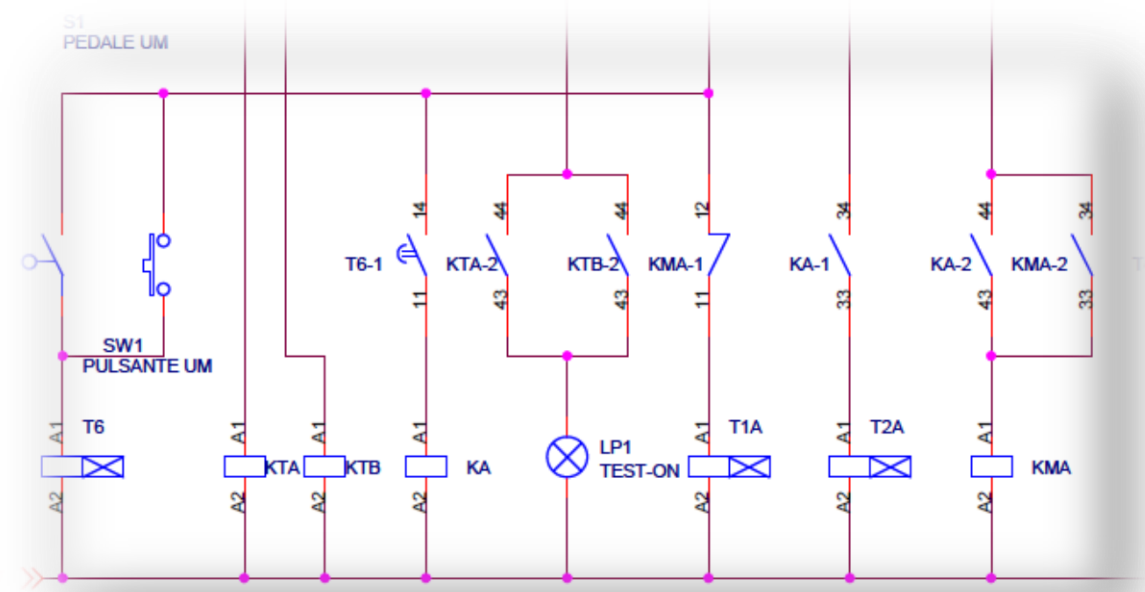
PROJECT MANAGEMENT AND PLANNING



CIRCULAR ECONOMY

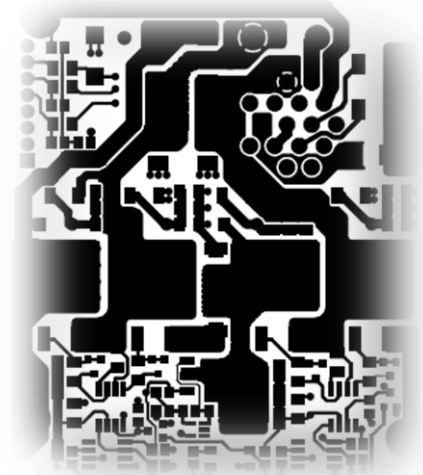
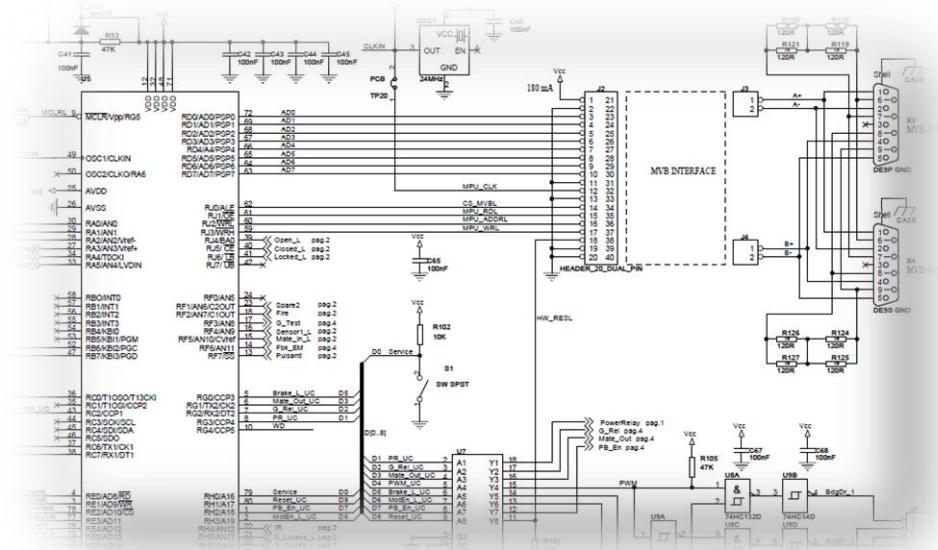
ELECTRICAL & HW/SW DESIGN

- Concept diagrams and functional diagrams.
- Definition and selection of components suitable for use in the specified operative environment (connectors, terminal blocks, cables, switches, etc...)
- Sizing of cables and protections
- Drafting of the cabling lay-out starting from the circuit diagram. Drafting of connection tables and tables of cable bundles. Study of accommodation for cables vias. Sizing ducts, pipes and mounting brackets
- Functional and Product specification definition
- System Integration
- Study of interfaces and environmental requirements of installation (e.g. electromagnetic compatibility). Testing on field support
- Simulation of complex systems using Matlab-Simulink, both as components and interfaces



ELECTRICAL & HW/SW DESIGN

- Activities at system level for design and integration
- Drafting of functional diagrams from the technical specification. Components choice and sizing
- Analysis of interfaces and operative environment requirements for installation
- Engineering and mechanical sizing of the card and/or the subrack / Thermal analysis
- Production of PCB and complete system (only prototypes or little series)
- Support for type testing (in particular, electromagnetic compatibility tests) and functional tests (CAN Analyzer, SIL, HIL)
- Software design & development (C, C++, JAVA, Python)
- System modelling and simulation (Simulink)
- FPGA / ASIC
- Firmware development for Microcontrollers (Microchip, ST, Renesas, ON)
- Hardware / Software on board integration





FMECA/DFMEA – RELIABILITY AND SAFETY ANALYSIS

- Reliability calculations of electrical and electronic systems
- Hazard analysis
- FMECA/FTA and Safety Analysis, Safety Reports
- DFMEA on wiring harness for HD Vehicles
- Test and Validation based on RTCA/DO-178B, MIL, CENELEC, IEC
- Project and development of Hardware and Software Test Bench
- Test cases
- Test Performance and reporting
- Reliability Centered Maintenance
- Life Cycle Cost
- Technical Documentation
- ILS: Integrated Logistic Support



AERO SYSTEMS

ELECTRICAL SYSTEMS

MECHANICAL SYSTEMS

ELECTRONICAL SYSTEMS

ENGINE

SPACE SYSTEMS



ELECTRICAL

ELECTRONICS

MECHANICAL

PNEUMATICS

HYDRAULIC



PRODUCT AND PROCESS MECHANICAL ENGINEERING

- Feasibility studies
- Requirements definition
- Automotive and railway mechanical Design
- Structural calculation
- Manufacturing engineering
- Supplier management
- Support to production
- Functional tests
- Verification of compliance with the requirements





PROJECT MANAGEMENT AND PLANNING

- Planning and definition of the scope of the project
- Activity planning and sequencing
- Resource planning
- Development planning
- Time estimation
- Project Costs and budget definition
- Risk analysis
- Monitoring the Project in each phase identifying possible criticalities
- Set and implement the recovery action plan
- Documentation Management
- Business Partnering
- Suppliers Management
- Quality control
- Cost reduction analysis



CIRCULAR ECONOMY

Ethos gives support to Companies during the transition toward a circular economy business model, providing concrete solution to make circular and sustainable their production processes. The transition takes place through 5 stages:

REDESIGN/ECO DESIGN

Design products to extend their life and thinking from the beginning their end-of-life employment and making easier their disassembly and renovation.

MODULARITY AND VERSATILITY

Design products thinking about their modularity and versatility so that their use can be adapted to changing external conditions

RENEWABLE ENERGIES

Encourage the use of renewable sources leaving the present energy model

ECOSYSTEM APPROACH

Thinking carefully about the whole system and considering the cause-effect relations among the components

MATERIAL RECOVERY

Replacing virgin raw materials with recycled materials coming from recovery procedures that maintain quality. By its own expertise, Ethos leads the Customer to redefine the production processes, minding the whole procedure to create a system able to self-recycling through: waste reduction, reuse of products at the end of their life cycle, restoration of the components and their reuse as spare parts of new products, material recycling.



INNOVATION AND DIGITAL TRANSFORMATION

Ethos with its expertise is able to help your company with methods and processes in order to drive your digital transformation and innovation programs forward:

- Business Innovation models
- Design and planning the digital transformation
- Implement the transformation plan
- Development of IoT architectures
- Industry 4.0
- Machine Learning
- Use of Big Data for optimization of projects, services and investments
- Data Driven approach



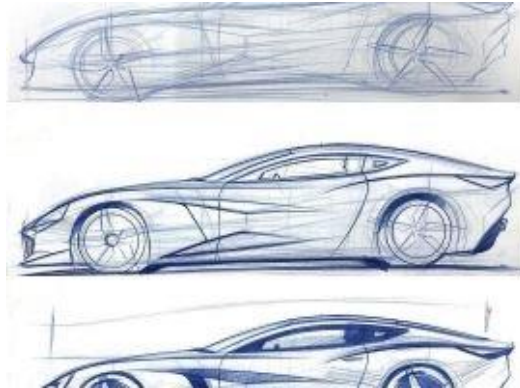


MARKETS

Operiamo nei seguenti settori:



RAILWAY



AUTOMOTIVE



NAVAL



AEROSPACE AND DEFENCE



INDUSTRY



ECO DESIGN



RENEWABLE ENERGY



FOOD AND BEVERAGE



For any further question or request of information you may need, please do not hesitate to contact us.

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Thanks for your attention!

