



MB The partner for Smart Solutions

Company Presentation

Agenda

01

Introduction

02

Location

03

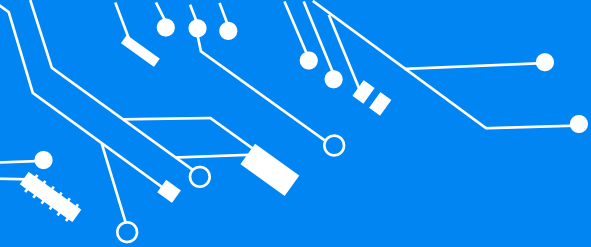
Our services

04

Partners

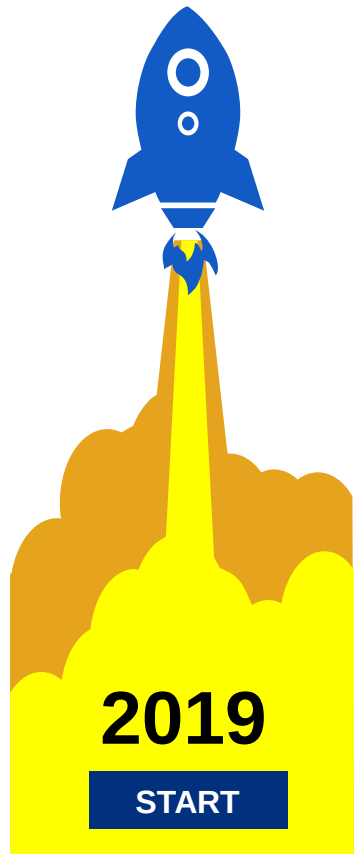
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References



Introduction

Who are we ?

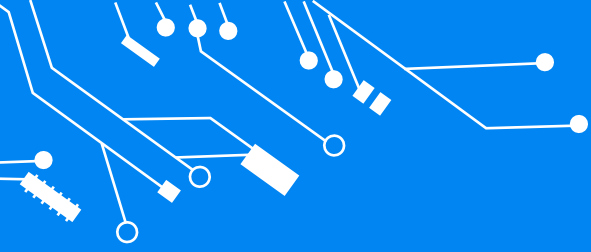


MB Smart Solutions is services provider company with high skilled and more than 20 years experienced Team in the following fields:

- Design, engineering and Integration of Control and safety Automation systems for Industrial processes, fulfilling related standards.
- Research & Development in Hardware and software Electronics according to recent standards...

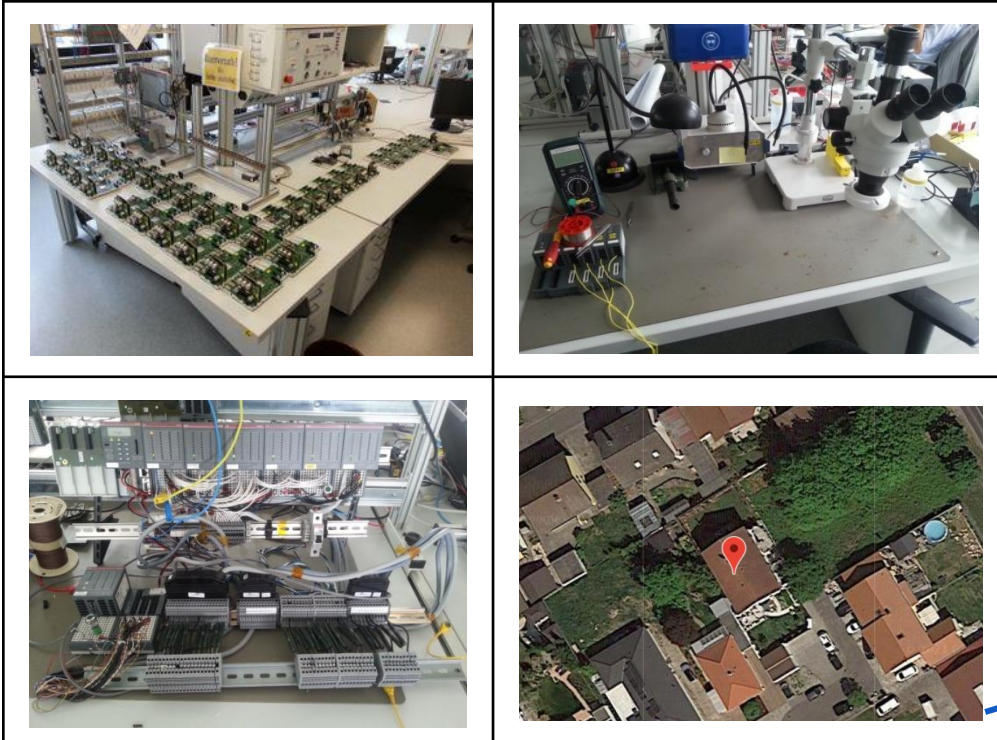
MB Smart Solutions thrives in the fields of instrumentation, control and safety automation, electricity, electronics and information technology-based systems, thus targeting the different industrial sectors such as Oil & Gas, Petrochemicals, food industry, pharmaceuticals...

MB Smart Solutions expertise translates into knowledge of several critical systems such as Safety Instrumented Systems (SIS) for Emergency Shutdown (ESD), Fire & Gas (F & G), Burner Management (BMS) , HIPPS, according to IEC61508 / 61511 and IEC61131-2 in addition to the Functional safety machinery standards ISO13849 and ISO12100.

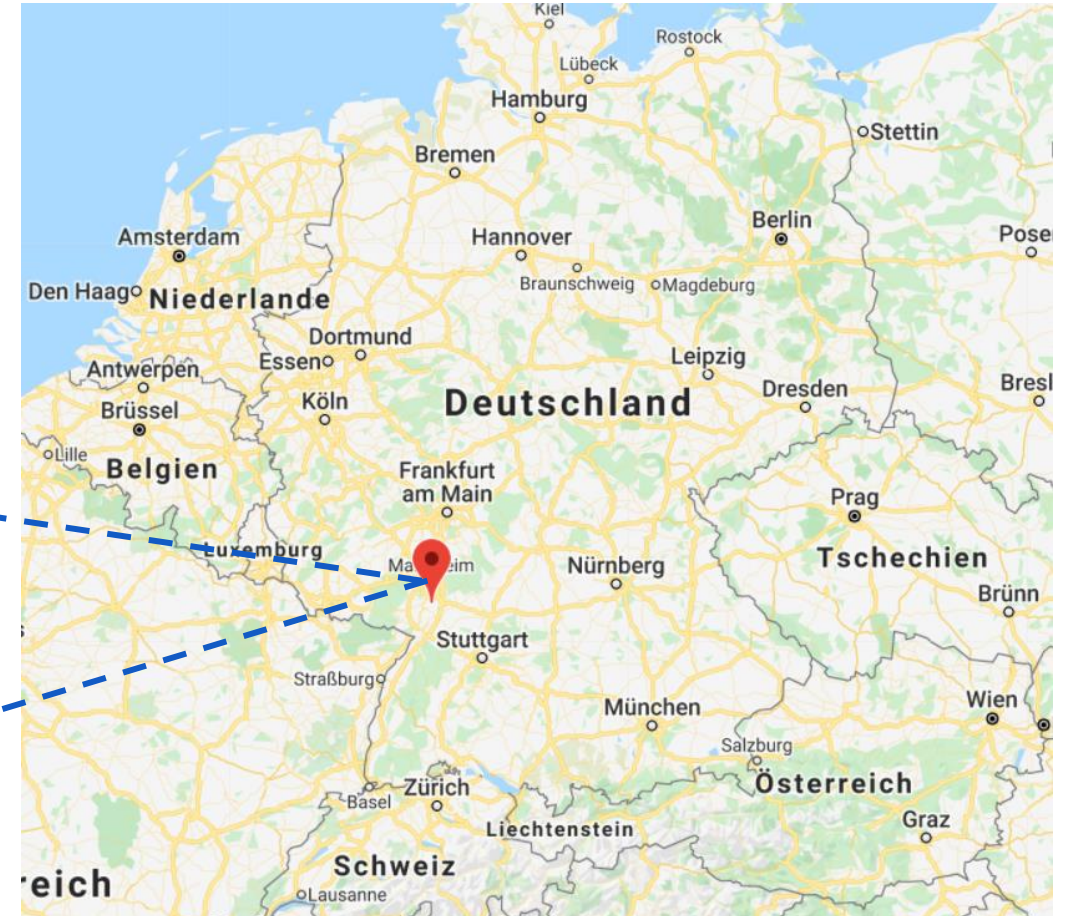


Location

Where are we ?



Am Kronenberg 16a
68794 Oberhausen-Rheinhausen
Germany



Our Industries

Solutions for the Process Industry

- Oil & Gas Applications
- Petrochemical-
- Chemical-
- Pharmaceutical- and
- Energy-Producing Industry



Safety Systems for the Rail Industry

- Level Crossing
- Railway Signalling
- Rolling Stock
- Power Supply
- Automatic Train Control Systems



Solutions for Intralogistics & Machine Safety

- Autonomous Transportation and Logistic Systems
- Conveyors, Elevators, Cranes,
- Cableways,
- High-bay Storage,
- Assembly and Coating Lines

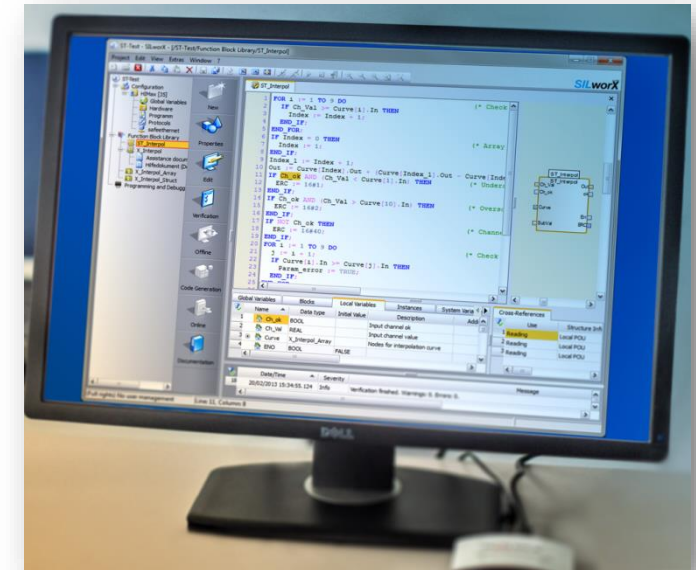
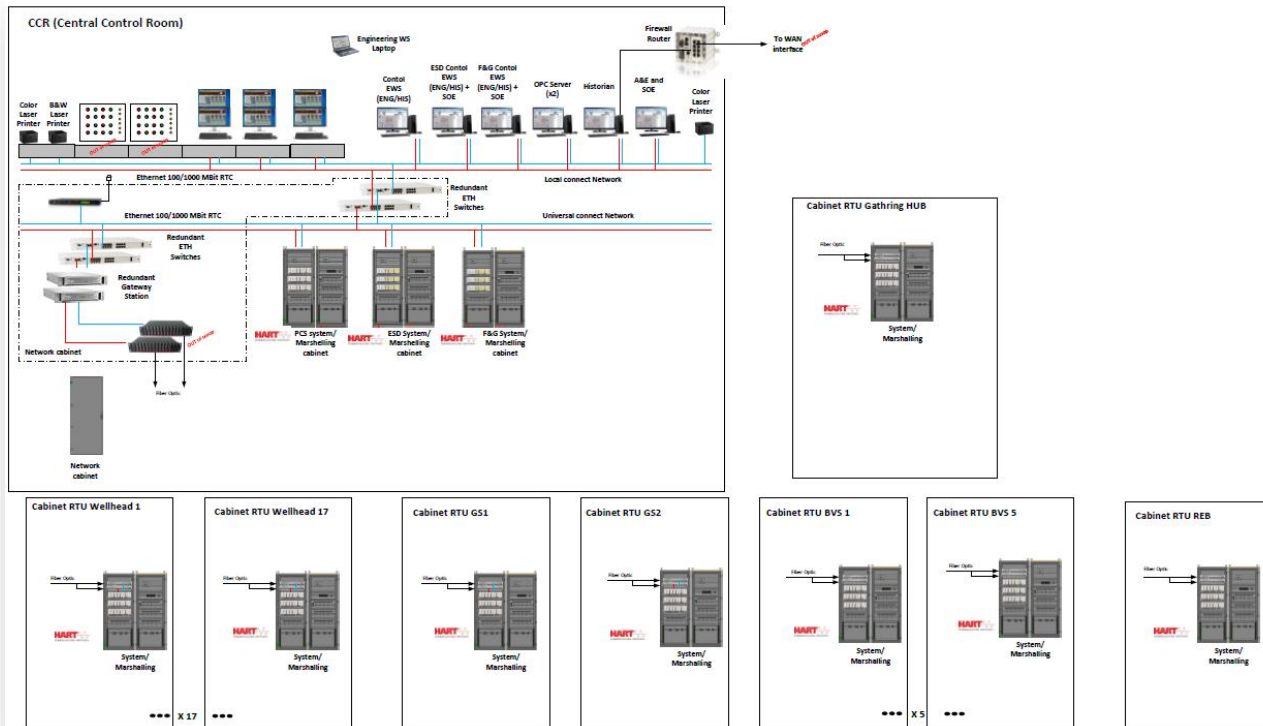


Our Services

Project Engineering and Process automation

MB Smart Solutions has a team of highly qualified engineers who possess vast knowledge in control and Safety Automation applications and industry standards.

MB Smart Solutions have the skills, resources and methodology to deliver safe, reliable, cost-effective solutions for long term productivity and efficiency



- Functional Design Specification
- Control Panel Design and Documentation
- Software Configuration and Development
- Detailed Engineering Documentation
- Cabinet System Integration
- FAT & IFAT Testing
- As Built Documentation

Our Services

Project Engineering and Process automation



MB Smart Solutions provide optimized solutions to automate process plants in various industries using the most advanced Process control systems. Solution for Controls & Safety Automation Systems, Instrumentation, Electrical, from Consulting, Design, Engineering to After Sales Support

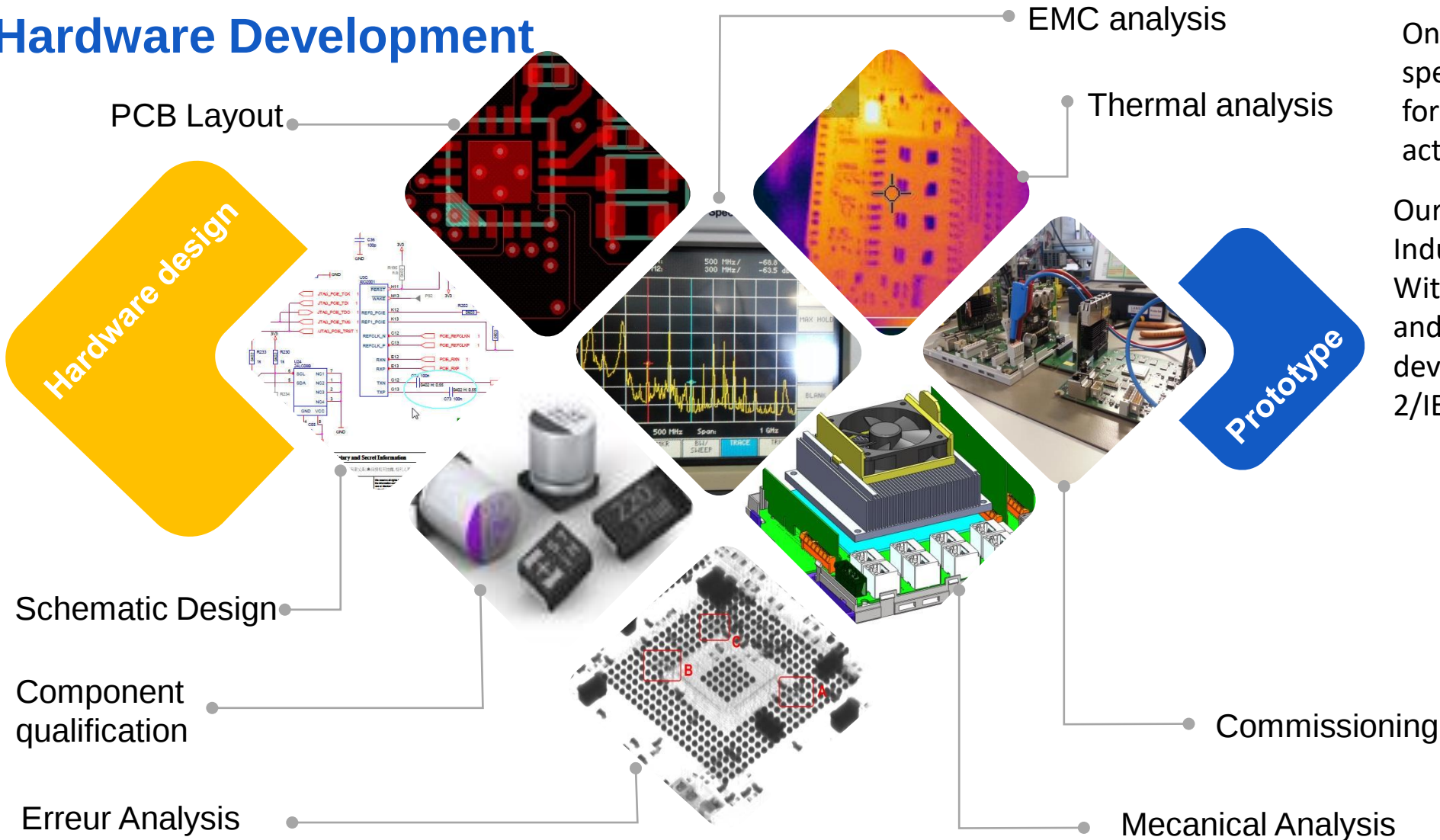
- PLC & DCS Based Process Control System.
- Safety System for applications such: ESD, FGS, HIPPS & BMS
- SCADA & Telemetry (RTU) System.
- Leak Detection System (LDS).
- Turn-key Automation Solution.

Manufacturer	Known Products
ABB	800xA, AC 800M, AC 900F, AC500, AC500-S
HIMA	HIQuad, HIQuadX, HIMatrix, HIMax
Schneider	Triconnex, XPS-MF40XX, M340
Siemens	Simatic S7 Full Range



Our Services

Hardware Development

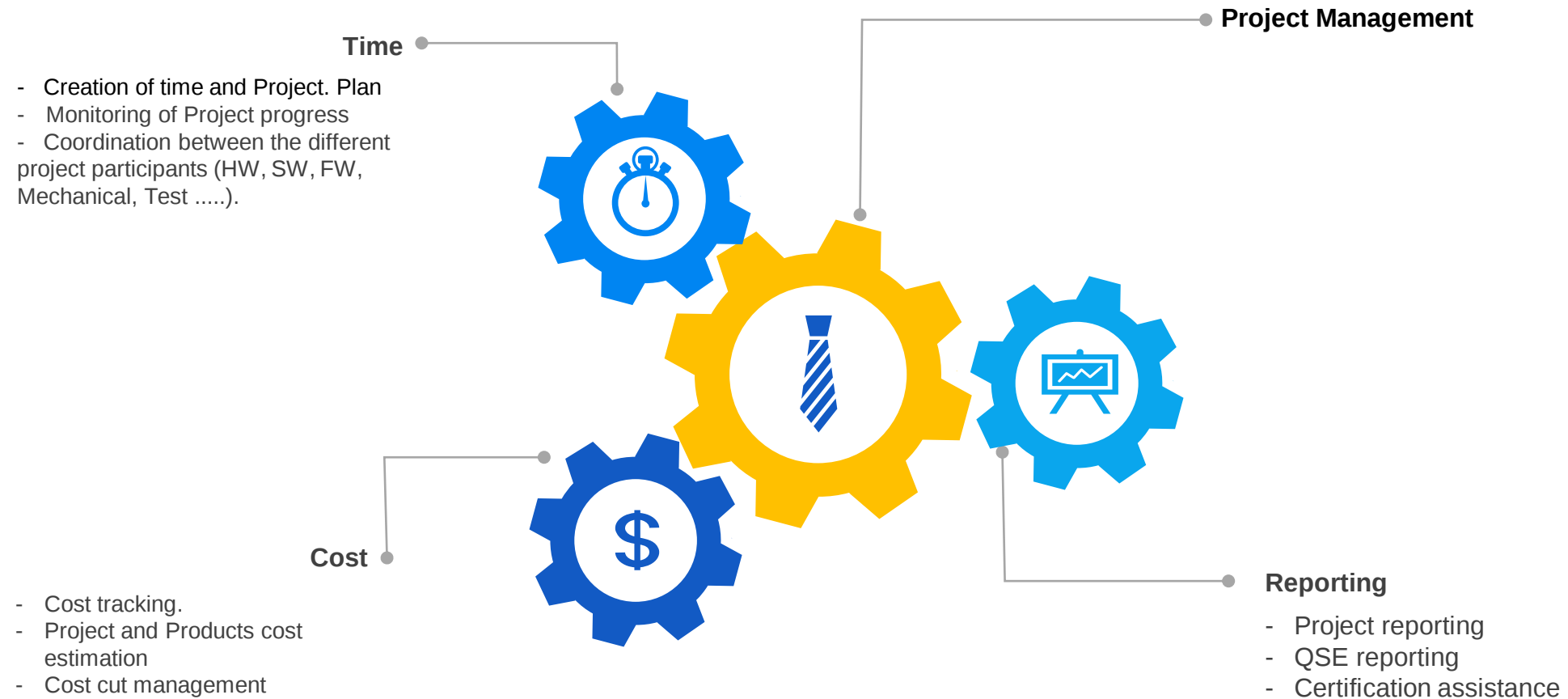


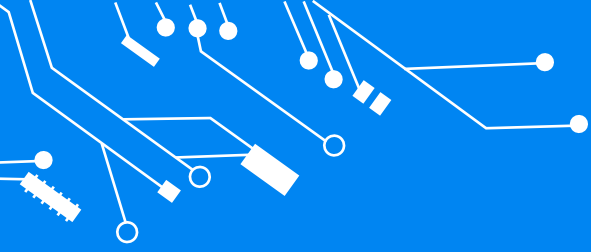
On request, we can provide specialized custom reference designs for development and prototyping activities.

Our main expertise is related to Industrial Safety Automation. With particular experience in Control and Safety Automation Systems development according to IEC 61508-2/IEC 61508-3, IEC 61131, IEC62061...

Our Services

Project Management





Our Services

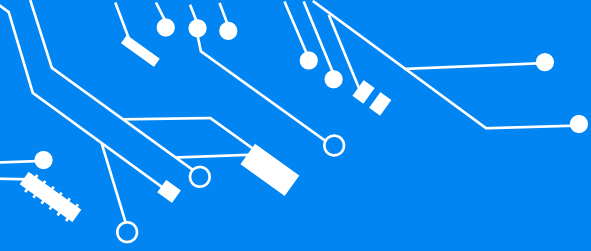


Safety Engineering

We have a particular experience and are certified team in Control and Safety Automation Systems development according to IEC 61508-2/IEC 61508-3, IEC 61131, IEC62061...

- Concept with Safety related Architecture.
- Create requirement SRS.
- Create FMEA, FMEDA.
- Create Fault insert Specification.
- Safety documentation.
- Review.
- Tests





Our Services

Documentation



Requirement

create requirement documentation:

- TRS (Technical req. Spec.)
- SRS (Safety Req. spec.)
- SFR (software requirement.)



Specification

- Test specification
- FMEA, FMEDA
- Change and impact analysis



Report

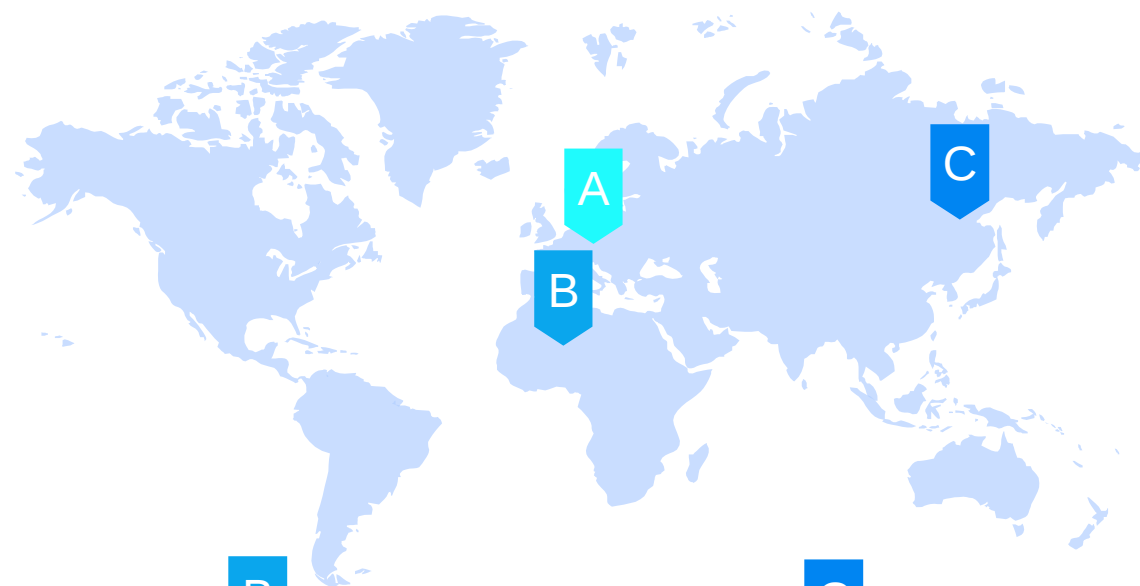
- Tests Report



Release

- Data for user Manual
- Release documentation

Our Partners



A

B

C

Current partners

Europe

- | | |
|--------------------------|-------------|
| - HIMA | Germany |
| - ASIA | Germany |
| - NTC Systems | Germany |
| - Ifm | Germany |
| - INP-e | Germany |
| - EnBW | Germany |
| - ABB AG | Switzerland |
| - Safetec | Italy |
| - Intelliway | France |
| - Schneider Electric.(*) | France |

Africa

- | | |
|-----------------------|---------|
| - IID Eurl | Algeria |
| - PSI | Tunisia |
| - EIServ | Tunisia |
| - O2M Technology | Tunisia |
| - Haycom Technologies | Tunisia |
| - L&T | Morocco |
| - General Automation | Algeria |

Asia / Middel east

- | | |
|-------------|-------|
| - Sifang(*) | China |
|-------------|-------|

(*) Ongoing partners

References

South Pars Iran Phase 1, 2, 3 ,7 ,8 ,9,10 and 11

Costumer	Mitsubishi corp.
Location	Iran
Integrated system	HIMA HIQuad - SIL3
SOW	Planning, mounting, Programming, integration (HW,SW, DCS “Yokogawa and Emerson”) and testing, FAT and Documentation



Offshore Drilling Platforms SPP1 ,SPD1 ,SPD2 and
Personnel Cabins Platforms SPQ1



Onshore Refining and Distribution Platform

References

Exxon Benelux	
Costumer	Exxon
Location	Netherland
Integrated system	HIMA HIQuad - SIL3
SOW	Planning, mounting, Programming, integration (HW,SW, DCS “Honeywell TDC 3000”), testing, FAT, SAT and Documentation



EXXON Holland for the two chemical reaction boilers ISC11 and ISC12.

References

Shell Mördijk	
Costumer	Shell
Location	Netherland
Integrated system	HIMA HIQuad - SIL3
SOW	Planning, mounting, Programming, integration (HW,SW, DCS “Honeywell TDC 3000”), testing, FAT, SAT and Documentation



Shell Mördijk Refinery

References

Gulfaks Norway	
Costumer	ABB Exxon
Location	Norway
Integrated system	HIMA HIQuad - SIL3
SOW	Revamping, Programming, integration (HW,SW, DCS “ABB AC800xa”), testing, FAT and Documentation



Gulfaks Norway

References

TPS Tunisia	
Costumer	EISERV, TPS
Location	Tunisia – Sfax, Remoura, Tataouine et Gubiba
Integrated system	HIMA HIMatrix & HIMax - SIL3 ; GE PAC 8000
SOW	Programming and integration (HW,SW, SCADA “GE proficiency”), testing, FAT, SAT, Commissioning and Documentation



CFTP Sfax

References



HIMatrix

Safety related system SIL3 F2 DO16 02

F30 03, F31 03, F35 03

(new Generation)

- Creating Concept
- Creating functional and safety specification
- FMEA
- HW Design
- Testing
- Documentation
- Approvement and certification.
- Release documentation



HIMax

Safety related system SIL3

XDO 16 01

- HW Design
- Testing
- Documentation

Control system (non Safety)

Whole System (CPU and IO Modules)

- Project management
 - Time scheduling
 - Cost and Time monitoring
 - Coordination (HW, Software , mechanic, production and approvement)
 - Reporting



M45

Safety related system SIL3

- Review Concept
- Review safety Specification
- Reporting

References

 Schneider Electric France



XPSMF40xx

Safety related system SIL3

- Creating Concept
- Creating functional and safety specification
- FMEA
- HW Design
- Testing
- Documentation
- Approvement and certification.
- Release documentation



HIMatrix F31

Safety related system SIL3

- Project management (OEM Product)
 - Time scheduling
 - Cost and Time monitoring
 - Coordination (HW, Software, Production, Approvement and certification “ TÜV ”)
 - Review documentation
 - Reporting

References

ABB ABB AG Germany

AC500, AC500-S



Control system (non Safety)

DO524, DA502, PM5630-5675-ETH,
CI574, CI597, AC522, PM590-ARC ,
PM595-F-4ETH and Others

Safety related System (SIL3)

SM560-S, AI581-S, DI581-S, DX581-S

- Product design
 - Creating Concept
 - Creating functional specification
 - Component selection
 - Component qualification
 - Review
 - HW Design
 - Testing
 - Documentation
 - User Manual check.
 - Approvement.
 - Release documentation
- Project management
 - Time scheduling
 - Product and Project cost estimation
 - Coordination (HW, Software , mechanic, production and approvement)
 - Cost Cut management
 - Cost and Time monitoring
 - Reporting

References

STF-7000



Safety related System (SIL2)

Fire fighting system

- Review Concept
- Review safety Specification
- Review Schematic of all CPU, communication and IO Boards
- Reporting

References

Others



railway switch controller

Safety related System (SIL4
according to EN 50129)

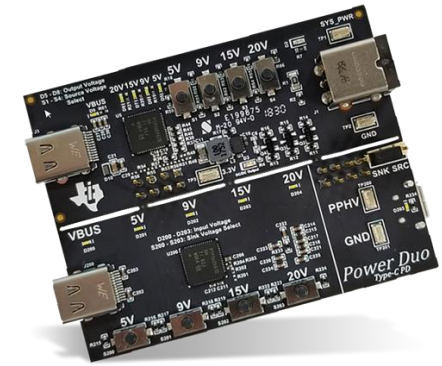
- Review Safety Requirement Specification
- Create Functional requirement specification
- Review Concept
- Create FMEA
- Create functional and safety Test specification
- Review Schematic
- Review Factory Test specification



SSI encoder

Safety related System (SIL2)

- Review Schematic
- Create functional and safety Test specification



USB-C Power delivery

Automotive application

- Review Requirement
- Create Concept
- Create schematic
- Create test specification



THANK YOU