



# Leaders in risk engineering and EHS solutions

AN ISO 9001:2015 CERTIFIED CONSULTING ORGANISATION



# ABOUT US

Cholamandalam MS Risk Services Ltd., is a 50:50 joint venture between the INR 300 billion Murugappa Group and Mitsui Sumitomo Insurance Group, Japan. With over 200 risk engineering experts, we are the largest employer of Environment, Health & Safety specialists in India and offer comprehensive risk management and engineering solutions.

With two decades of experience and over 8500 consulting projects we are able to offer best in class, customized services to organizations to optimize their EHS performance, and set new benchmarks in safety performance.

We are also strengthened by our strategic partnerships with Arcadis, a global EHS consulting company ranked 5<sup>th</sup> in the world, and our associate status with Inogen, a global corporation providing multi-nationals with consistent and sustainable EHS and safety solutions world wide.

We excel in providing a spectrum of services across the lifecycle of a project - from the conceptualization stage, to design, until decommissioning be it in Environment Management and Sustainability, Process Safety, Electrical Safety, Logistics Risk Consulting and Construction Safety.

Since our inception we've had the experience gathered from across 42 sectors including Automobile, IT/Telecom, Pharmaceuticals, Fertilizers, Chemical, Power Plants, Oil & Gas, Cements, Construction, Textile, Retail etc.

Chola MS Risk Services also offers EHS Training, Competency building and Assessment services through its Safety Academy. Besides offering Classroom based training for Corporates, it extensively uses the power of technology to run virtual classrooms, blended learning and online e-learning courses on a wide variety of subjects in risk engineering and safety.

## CORE CONSULTING DOMAINS

Process Safety



Environment Consulting



Electrical Safety



Construction Safety



Insurance Support Services



Logistics Risk Management



# VISION

To be known as an innovative Risk Management and Engineering Solutions provider across the globe, while offering customers world class services.

## CORE VALUES

Uphold honesty, integrity and ethical values



Strive for technical excellence through creativity and innovation



Commitment to customer satisfaction



Promote challenging and vibrant work environment



Encourage teamwork and continual development of the individual



## GREAT VISION. GREAT TEAM.

An agile organization with a team of over 200 dedicated and highly specialized engineers. Our Leadership team has specialist work experience of 15 - 25 years, with an eminent reputation for sheer technical excellence.

Our HR philosophy and mission is to create a positive work environment. We take pride in the culture of innovation and commitment to customer delight.

- ▶ 200 strong
- ▶ 65 team members with over 10 years of work experience
- ▶ From the best colleges in India
- ▶ OSHAS 18001/ISO 14001 certified lead auditors
- ▶ Accreditation from NABET
- ▶ IEC Ex certified professionals
- ▶ Safety auditors certified by DGFASLI
- ▶ 5 FAE consultants
- ▶ Certified Level I & Level II Professional Thermographers
- ▶ Certified Functional Safety Experts
- ▶ Certified EIA coordinators
- ▶ BEE certified energy auditors



AICHE®

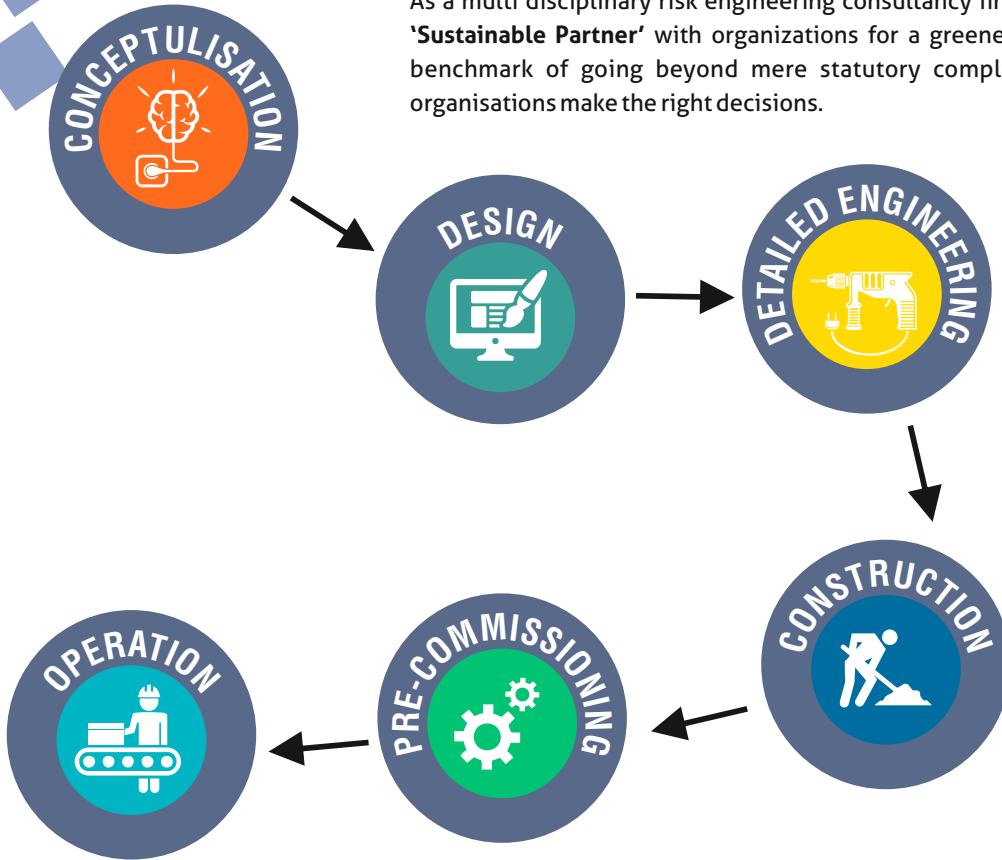


TÜVRheinland®  
Precisely Right.



# SPECTRUM OF SERVICES ACROSS THE LIFE CYCLE OF A PROJECT

As a multi disciplinary risk engineering consultancy firm, we work as a '**Sustainable Partner**' with organizations for a greener world, setting benchmark of going beyond mere statutory compliance and help organisations make the right decisions.



Our expertise blends with clients' technical requirements, resulting in a spectrum of services across the lifecycle of a project – from the Conceptualizing stage till Decommissioning .



# INOGEN® PARTNER

We are proud to say that we are a Partner in the Inogen® body.

Inogen® assists multi-national clients by resolving liabilities from the past, addressing today's requirements and delivering solutions for the future.

With offices located on every continent, more than 6,100 staff worldwide, and projects completed in more than 120 countries, Inogen® provides a geographic reach unparalleled in the industry.

Just as important is the breadth of the service offerings. With the diversity of its membership, we are able to deliver a broad spectrum of environmental, health and safety related services in areas where our competition falls short. Inogen® represents a unique and innovative business model with a single point of contact delivering a competitive, cost-effective service around the globe. The Global Practice Standards set uniform methodologies for consistent execution of services, and the robust e-platform and Key Account Managers provide effective project execution, content delivery and business management for clients around the world.



**INOGEN®**

**GLOBAL THINKING. LOCAL DELIVERY.**

OVER  
**160**  
Offices Worldwide

OVER  
**6,100**  
Staff Worldwide

**The global connections to achieve superior local results. Inogen® offers a wide range of services to a diverse range of customers:**

## Solving your global EHS needs

- ▶ Efficient & consistent work product
- ▶ One point of contact
- ▶ Access to all of our global resources
- ▶ The broadest base of industry experience

## Resolving liabilities from the past

- ▶ Site investigation
- ▶ Remediation
- ▶ Liability transfer
- ▶ Portfolio liability management

## Addressing today's requirements

- ▶ Due diligence
- ▶ Corporate EHS programmes
- ▶ Compliance
- ▶ Training
- ▶ Knowledge & accountability management
- ▶ Audits & assessments

## Delivering solutions for a sustainable future

- ▶ Cleaner production
- ▶ Corporate social responsibility
- ▶ Life cycle analysis
- ▶ Risk management
- ▶ Assurance services
- ▶ Water resource management
- ▶ Value chain optimization

# PROCESS SAFETY



**Process Safety Management**



**Project Safety Solutions**



**Functional Safety**



**Safety Management**



**Fire Safety**



**HAZOP, QRA and other PHA studies**

## Process Safety Management (PSM)

- PSM Audit/PSM Gap Analysis Study
- Process Safety Culture Survey
- PSM System Implementation – Handholding & Support
- PSM Training Program

## Safety Management

- Comprehensive Safety Audit
- Hazard Identification and Risk Assessment
- Development of EHS Systems and Manual
- Safety Culture / Perception Survey
- Gap Analysis & Benchmarking of Safety Management System
- Safety Case Development
- Behaviour Based Safety (BBS)
- E2s-Emotion & Engineering Driven Safety
- Developing emergency Response & Disaster Management Planning(ERDMP)
- Machinery Risk Assessment
- Building Safety Audit
- Job Safety Analysis
- Accident Investigation
- Process safety Training Programmes

## Project Safety Solutions

- Project, Health, safety & Environment Review (PHSER)
- Project Quantitative Risk Analysis (PQRA)
- Pre-Commissioning Audit
- Pre-Start Up Safety Review & Ready For Start Up study
- Pre-Occupancy Audit
- Shutdown Safety Management Services

## Fire Safety

- Design of Fire Detection System
- Design of Fire Protection System
- Fire & Gas Detection Mapping System
- Fire Water Network Analysis
- Fire Hazard Management
- Fire Safety Audit
- Support & Monitoring of Fire Protection Execution and Commissioning

## Functional Safety

- Safety Integrity Level (SIL) Identification
- Safety Requirement Specification
- SIL Assessment
- SIL Verification & Validation
- Layer of Protection Analysis(LOPA)

## HAZOP, QRA and other PHA Studies

- Hazard & Operability Study(HAZOP)
- Quantitative Risk Assessments (QRA)
- Hazard Identification Studies(HAZID)
- Bow-Tie Analysis
- What-if Analysis
- Reliability, Availability& Maintainability(RAM)
- Fire & Explosion Risk Assessment Study (FERA)
- Escape, Evacuation, & Rescue Analysis (EERA)
- Emergency Planning Zoning Study (EPZ)
- FTA/ETA/FMEA studies
- Dispersion modelling
- HAZOP Revalidation
- Building Radiation Impact Assessment

# PROCESS SAFETY MOVING TOWARDS EXCELLENCE



# ENVIRONMENT MANAGEMENT & SUSTAINABILITY SERVICES

As a certified Environment Impact Assessment (EIA) consultant organization by NABET EIA accreditation committee, a constituent of the Quality Council of India, we offer some very specialized environmental and energy consulting services catering to the growing need for expert council in this area. The list of challenges we face today, be it, Water Management, CO2 emission, Fuel consumption, Sewage & Solid waste management, Hazardous waste management, Air pollution, Soil erosion & degradation, Loss of Biodiversity are endless, and requires both cognizance and comprehension of the issues.

**Environment Impact Assessment**



**Marine EIA**



**Waste Water Consulting**



**Water Footprint Analysis**



**Marine Ecological Monitoring**



**Corporate Social Responsibility Programs**



**Air-Quality Modeling & Management**



**Noise Impact Assessment & VOC Emission**



**Social Impact Assessment Studies**



**A NABET Accredited EIA Consultant Organization Accredited Sectors -** Petroleum Refinery | Ports & Harbours | Cement Plants | Thermal Power Plant | Pulp & Paper Mill | Chemical Fertilizers | Building and Construction | Petrochemical Complex | Synthetic Organic Chemicals | Mining of Minerals | Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes| Highways | Township and Area development projects







# ENVIRONMENT MANAGEMENT & SUSTAINABILITY SERVICES

Our strength lies in the simple fact that we understand the environmental setting, culture and social system & regulations. Besides this we have expertise across sectors be it Ports & Harbors, Fertilizer units, Power Plants, Paper & Pulp, Gas Processing units, Pharmaceuticals or Refineries.

## Marine Environmental Studies

- Certified SCUBA divers
- NABET accredited marine ecologists
- Mangrove ecological management
- Hydrodynamic modelling

## Fugitive Emissions and Odour Management

- VOC-LDAR program
- VOC emission mapping - Imaging technique
- Odour emissions monitoring and modelling

## Surface Water Quality Modelling

- River water flow measurements
- Effluent dilution studies
- Eco-toxicity modelling of industrial discharges

## Environment Due Diligence

- ASTM Phase 1 site assessment
- Initial environment assessment
- Preliminary soil and ground water contamination mapping

## Flood Risk Assessment

- Flood level data simulation
- Prediction of peak flood levels for varied precipitation levels
- Developing flood level contour maps

## Wastewater Treatment Consulting

- Wastewater characterization
- Trends analysis of wastewater (influent) characteristics
- ETP unit operations and performance assessment
- Treatability studies
- ETP upgrade schemes
- Preliminary engineering design
- Developing bill of quantities

## Social Impact Assessment & CSR Schemes

- In-house social scientist
- Primary surveys
- Focus group discussions
- Advisory on land acquisition for industrial operations
- Developing need based CSR programs

## Ecological & Biodiversity Modelling

- Green belt and afforestation technical feasibility study
- Prediction of biodiversity dynamics of large afforestation program
- Ecological Dynamic Simulation Model (EDYS)

## Water Pinch Studies

- Sources and sinks analysis
- Water reuse/recycle and regenerate opportunities
- Water net work modelling and synthesis
- Conceptual plans

## Water Audits and Management

- Water security and water resource management study
- Exploring alternative water resource
- Improvement measures
- Innovative methods
- Preliminary water management syntheses

# CONSTRUCTION SAFETY MANAGEMENT



Considering the many challenges faced by the construction industry, in particular pertaining to an unskilled & migrant work force, project delays and cost over-runs, we've evolved a *suite of services* towards a **Comprehensive Construction Safety at Site Excellence Program**. The services are based upon our immense experience in working on mega infrastructure projects for some of the best power plants, Oil and Gas, Cement, Chemical, Telecom, Steel and Real estate companies in India.

We therefore fully understand your requirement in implementing a successful safety management system in any type, scale and stage of a construction project.



# CONSTRUCTION SAFETY MANAGEMENT



## WAYS IN WHICH WE CAN HELP YOU

Besides these we offer comprehensive services towards achieving Zero Accidents through an integrated approach of Process Safety Engineering (Hazid, Hazop, FEMA, QRA, PSSR, PHSER, F&G mapping etc) and Construction Safety Management during the project's life cycle.

1. We can help you in implementing globally recognized safety practices & sustaining it throughout the construction phase to **prevent injuries, fatalities and business interruption.**
2. We can work with you to establish a Safety Culture and cause a transformation in behaviour, through our **behaviour based safety programs & behaviour specialists.**
3. We do **intensive Gap Analysis Studies to identify core issues** and help you prioritize the areas of immediate focus.
4. Preparation of a **Construction Safety Manual & Contractor evaluation guidelines.**
5. Providing robust **Competency Building services** in the team and setting up of a world-class Training centre at site; be it **craft specific**, supervisory or general induction to safety to site.
6. Manpower deployment of Safety Experts & Domain Experts (**Scaffolding, Rigging & Lifting, Fire & Electrical**).
7. We can also provide you consultancy on **Shutdown Management Services, Fire fighting system design verification and performance test & Accident Investigations.**
8. We perform **Scaffolding Inspection & Certification services.**
9. Performance management by conducting periodic **Construction Safety Audits & monitoring Key Metrics.**
10. Safety culture transformation through the **unique Chola SUN Model.**



# LOGISTICS SAFETY

Safety as they say is priceless and does not come without focus. It requires careful and sustained intervention to reach excellence. It requires working with a knowledgeable partner and that's where we can step in and work alongside you to bring in the right interventions to ensure you see the right benefits.

## Warehouse Risk Management

- Warehouse Risk Assessment
- Warehouse Throughput Calculation
- Warehouse Layout Design
- Forklift Audits
- Forklift Operator Training and Evaluation



## Cargo Loss Minimization

- CBU Risk Management
- Cargo Loss Minimization Studies



## Transportation Safety Management

- Transportation safety Management System – Base line studies, audits & hand-holding
- Contractor Safety Programs
- Journey Risk Management
- Fleet Audits
- In-plant Traffic Layout study
- Road Accident Investigation
- ISO 39001 Management System



## Driver Skill Improvement

- Defensive Driving Training
- Driver Management Center
- Driver Clinics
- Deputation of Logistics Safety Officers
- Road Safety Awareness Campaigns
- Driver Accreditation Program





# LOGISTICS SAFETY WHY WE ARE UNIQUE

Leading Risk Management organisation with a dedicated business unit working on Logistics Risk Management  
**for over 15 years.**  
Working in collaboration with the Logistics Risk Management team of Inter-risk, Singapore and MSI, Japan.

Established and operating several Driver Management Centers (DMC) across India for leading MNCs. Our DMC concept won the  
**KRDWG Margadarshan 2013 Award for Innovation & Excellence**  
in Training, Coaching, Counselling and Mentorship.

SOP video developed by Chola MS Risk won  
**First prize in UNESCO's Global Road Safety Film Festival**  
during April 2013 at Paris.

Use of  
**modern technology & state-of-the-art instruments**  
to assess & train drivers (P-Drive, Seat Belt Convincer, Simulator, Geo fencing GPS, Fatigue monitoring devices & Virtual Reality).

Trained more than  
**30,000 drivers**  
in the last 3 years.

Providing a  
**Total Solutions Approach – Performance Linked Approach**  
to accident and damage prevention.

Helped global automobile companies  
**reduce their CBU**  
transportation losses significantly in the Indian market.

**Rich expertise across industries**  
be it hazardous goods transportation, Car carrier Transportation, F&B or people moving people.

Over  
**3,000 Fleet Audits & Warehouse Audits**  
for large Logistics & Supply Chain organizations.

Achieved  
**RoSPA accreditation**  
for defensive driving training and fleet audit. The first and only RoSPA accredited organization in India

Awarded  
**Most Valued Partner for Distribution Safety**  
by one of the largest Indian bottling plant.

Conducted over a  
**100 journey risk surveys**  
across India, spanning more than  
**100,000 kms.**

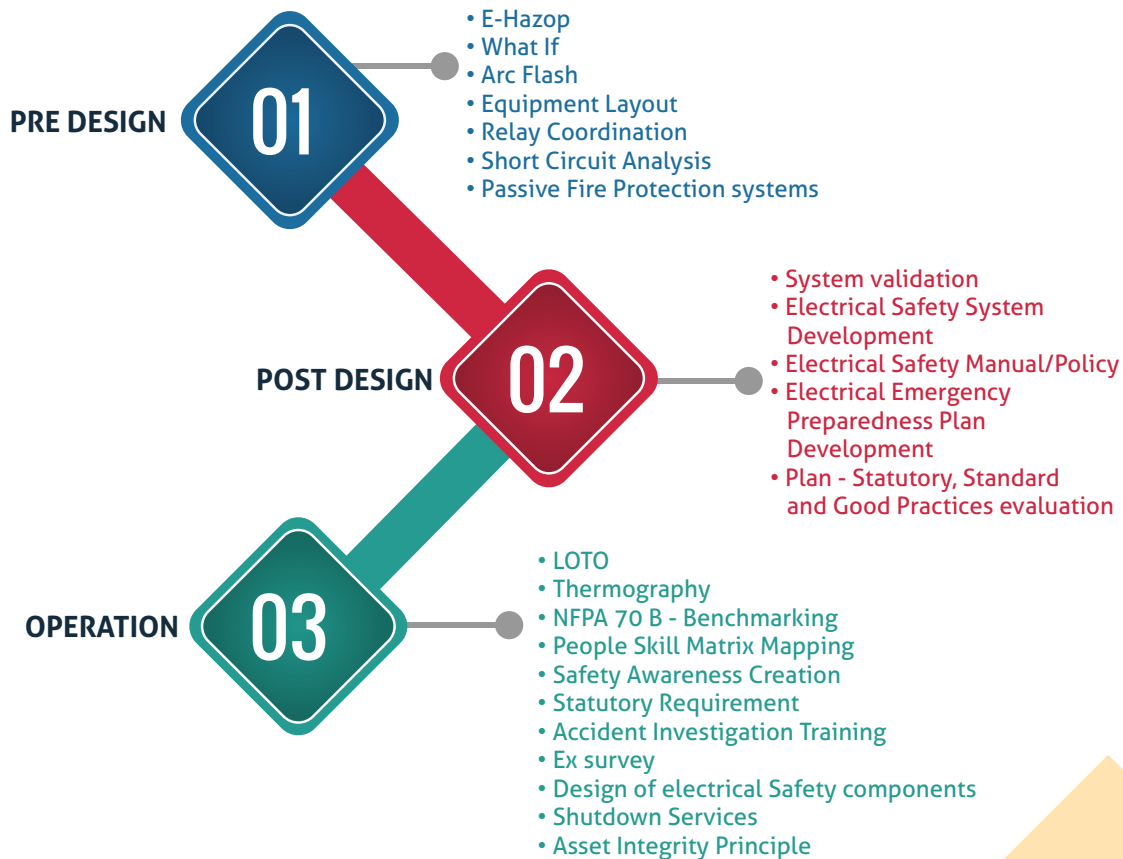
Developed & executed many  
**Road Safety Campaigns**  
across India for some of India's best organizations.



# ELECTRICAL SAFETY

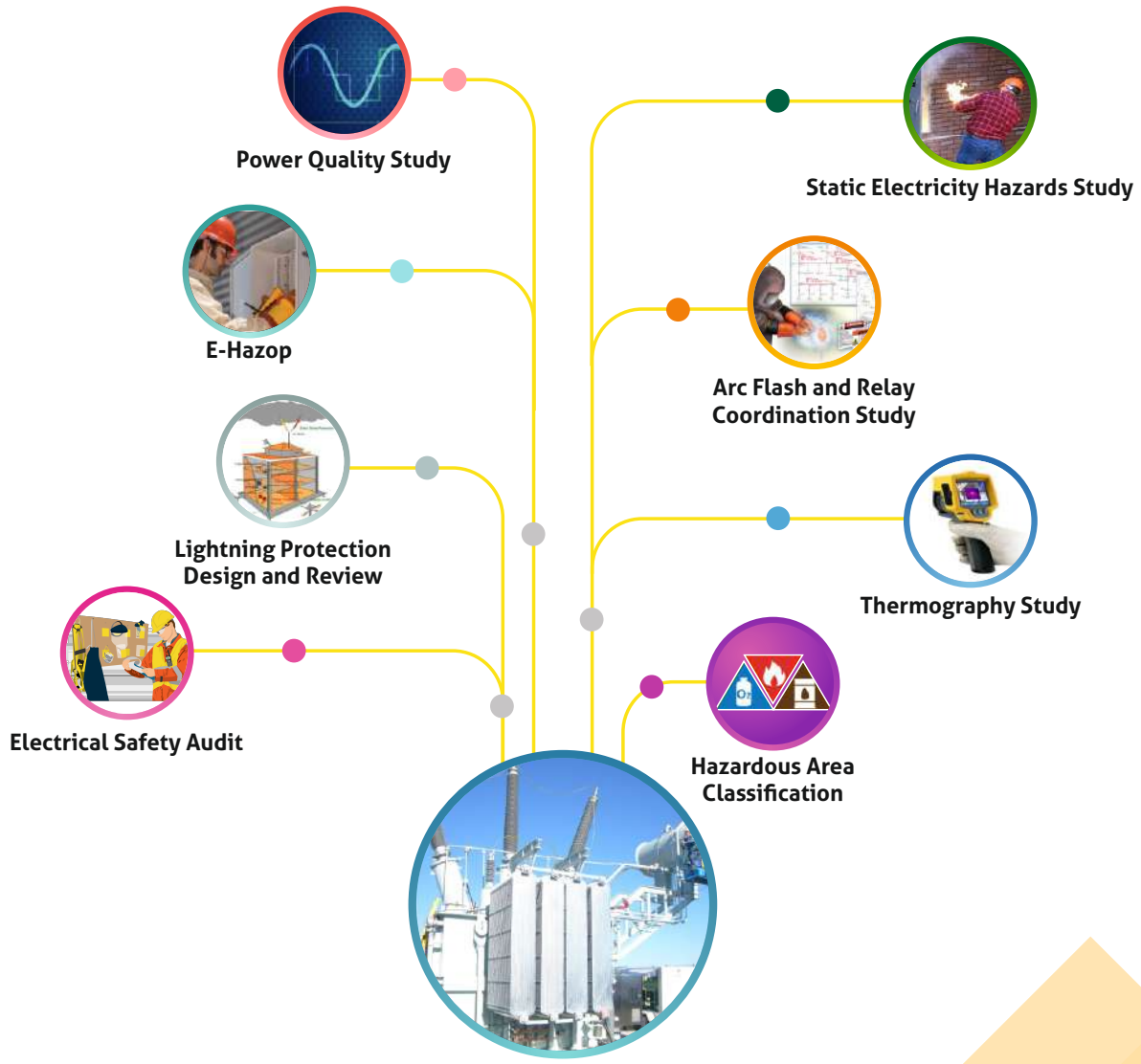
It does not matter at what phase or stage you are in your safety maturity model, we can step in and work alongside you to bring in the right interventions to ensure you see the right benefits.

## Elements of a world class electrical safety system





# ELECTRICAL SAFETY PORTFOLIO OF SERVICES



# CHOLA MS SAFETY ACADEMY



20 years of experience in EHS Consulting across multidisciplinary domains & industries with a strong grounding in both domestic & international markets gives us an edge over others in offering training.

5,000 training hours clocked till date



## Corporate

Premier  
Training  
partner



## Individual

First Choice for  
competency  
building for a  
HSE professional



## Formal Education

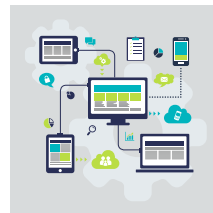
Preferred  
Education  
Partner

## TRAINING MODELS



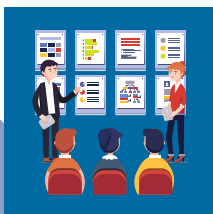
### E-Learning

These courses are designed as short but **powerful Competency building blocks** which can be accessed at your convenience. We have distilled and captured our expertise and experience into concise modules which are highly informative and constructive.



### Custom built e-Learning

Many organizations are using e-learning or technology enabled learning because of its benefits over traditional classroom training. Ofcourse, you have to **collaborate with the best to maximize the benefits. Our Instructional Designers and Domain Experts can build customized e-courses** to specifically cater to your training requirements, policies & practices.



### In Company training

We are able to address complex problems and convey solutions using simple and easy to comprehend language. Programs are designed as stepping stones or **Certification Enablers to acquire Industry recognized Credentials in EHS**. Our experienced team can bring out the best outcomes and participation.



### Centre for Excellence

If you are an ambitious HSE professional and wish to gain from our experience and **interact with our Senior Domain Experts, join us for specialized learning programs offered only at our Centre for Excellence.** Learn from the Leader and stay ahead of the rest.





# TRANSFORM YOUR SAFETY TRAINING INTO AN EXTRA ORDINARY EXPERIENCE

At the Chola MS Safety Academy we have the experience gained from over 8000 consulting assignments in Risk Engineering & Safety, spanning two decades from across the world. We also have a team of passionate trainers who are certified Safety Auditors (DGFSALI), Certified Functional Safety Experts, QCI approved environment experts, ROSPA certified trainers, Certified Level II thermographers etc. The cumulative experience of our domain experts and up-to-date knowledge about status, regulations, standards, global and local policies form the basis of our program. We have the experience of having delivered 5000 training hours.

## Some of our popular programs include the following

- Quantitative Risk Assessment (QRA)
- Confined Space Entry
- Hazard and Operability Study (HAZOP & CHAZOP)
- Safety Integrity Level (SIL) Assessment & Verification
- Layer of Protection Analysis (LOPA)
- Lab Safety, LPG Safety, Chlorine Safety
- Functional Safety
- Hazard Identification and Risk Analysis (HIRA)
- Process Safety Management
- Incident / Accident Investigation Techniques
- HazMat
- Behaviour Based Safety
- Safety Culture Transformation
- Construction safety for Managers
- Safe Scaffolding
- Work at Height
- Lifting & Rigging operation
- Safety in hot work (Welding, Gas cutting, Grinding)
- Electrical and portable equipment safety
- Excavation and Trenching Safety
- Safe LOTO
- Fire & Emergency Management
- e-HAZOP
- Understanding HAC
- Lightning Protection & Earthing Safety
- Arc Flash Study
- Core Principles of Electrical Safety
- Wastewater Management & ZLD
- Environment Management & Sustainability

# A FEW CREDENTIALS

First Asian company to be accredited by Kuwait Oil Company (KOC) to carry out specialized Process Safety Studies under 31 S category.

Certified Functional Safety Expert from Exida & Functional Safety Engineer certified from TUV Rhineland.

Part of a functional committee of Industry experts constituted to frame the Oil Industry Safety Directorate (OISD) 'Guidelines for Carrying out Quantitative Risk Assessment of Oil & Gas Installations' in India.

Closely working with CCPS for PSM initiatives in India & Organized the 8th CCPS Asia Pacific Regional Meeting in association with CCPS in Chennai.

Conducted over a 100 journey risk surveys across India, spanning more than 100,000 kms.

A proven track record of having achieved 80 million accident free man-hours at the construction site of one of the largest IT complexes in Asia.

OHSAS 18001 / ISO 14001 certified Lead Auditors in the team.

Audited over 1000 commercial offices & high rise buildings in a India.

Preferred training partners and auditors for top listed MNCs in India.

Pioneers in the field of Electrical safety in India, inception of the team in 1994.

Only organization in India to have engineers certified by IEC Ex for hazardous Area.

Trained more than 30,000 drivers in the last 3 years on road safety.

A NABET Accredited EIA consulting organization for 9 key sectors.

Certified Safety Auditors by DGFASLI (Directorate General, Factories Advice Service & Labor Institutes, Govt. of India).

Presented paper at the CCPS 1st Asia Pacific Conference on Process Safety at China "Implementing PSM in India".

Recognized by the Pharma Supply Chain Initiative (PSCI), London as a professional Independent third-party audit firm.

Pioneered the development a Safety ranking and scoring system for various industries with respect to Electrical safety.

Awarded a silver medal for recording 5 million accident free man-hours at the construction site of a world leader in cement manufacturing.

Achieved RoSPA accreditation for defensive driving training and fleet audit. The first and only RoSPA accredited organization in India.

Over 3,000 Fleet Audits & Warehouse Audits for large Logistics & Supply Chain organizations.



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SECTORS

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