

Group - IPS

Industrial Projects Services

Your partner for a better world

Guided by the United Nations Sustainable Development Goals, we are committed to helping our partners improve lives and livelihoods around the world.



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How can we help you help
the world?

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Anis Ben Hassena @2022

From the first spark of inspiration
to the final moment of production

Providing expert project management, engineering, and
value-added services across industries and around the world.

Building Confidence

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Group - IPS

Industrial Projects Services

In a few words

Group-IPS guarantees customized, reliable and efficient engineering and project management for industrial projects. This allows businesses to concentrate on their core activities while **Group-IPS** takes care of project costs, coordination and successful accomplishment.

In 1992, the 26-year-old Luc Tasiaux, then an employee of a major technology company, saw the first-hand consequences of insufficient project preparation and coordination.

He founded IPS to help businesses better manage their industrial projects, streamlining the path to success for companies with big ambitions.

Group-IPS is a multidisciplinary engineering company that focuses on feasibility study, preparation and management of industrial projects.

More than 3000 projects, from (small) technical modifications/ optimizations to the erection of green-field industrial facilities, have been successfully accomplished in the past 30 years.

Our specialized centers



Competence Center • IPS Belgium s.a. • 42, Avenue Robert Schuman • 1401 Nivelles • Belgium

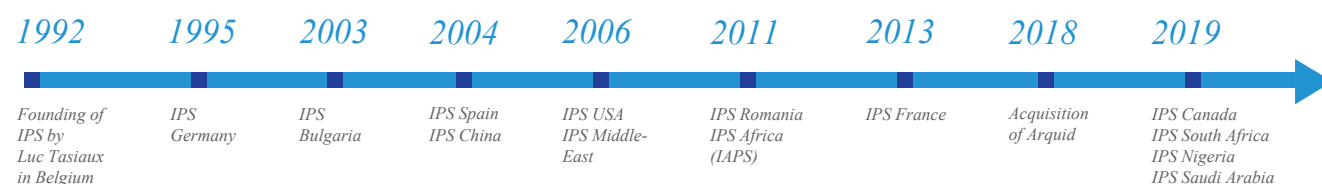


Technological Center • IPS Industrial Projects Services GmbH • Werkstrasse 9 • 15890 Eisenhüttenstadt • Germany

Global reach, local expertise

Our network of project managers and engineers offers a wide range of tailored services for any industrial project .

Group-IPS team members and service providers are trained with the same unifying methodology, projects progress smoothly and are completed on time and under budget.



A Global Network of Engineers



Our Values

INDEPENDENCE

Luc Tasiaux founded **Group-IPS** since 1992, and his ambitious, entrepreneurial spirit still characterizes our work today.

OPPORTUNITY

We empower our young entrepreneurs by providing the opportunity to lead and by participating in our clients' success.

CLIENT FOCUS

We place our client's interests first while continuously striving to add value.

INNOVATION

We are growth-oriented and consistently focused on technological innovation but never at the expense of resource management.

GLOBAL THINKING

As an international group, we are a united entity providing expertise across a global network of professionals.

CARE

We take care of our people, and we believe in working hard, having fun and expanding what's possible.

Our Mission

Group-IPS has grown over the years, but our mission remains the same: to help our customers improve millions of lives, all over the world. Therefore our aim is to become and remain the leader in industrial project services, delivering added value and transformative innovation to customers world wide.

Across every industry, we are building confidence...

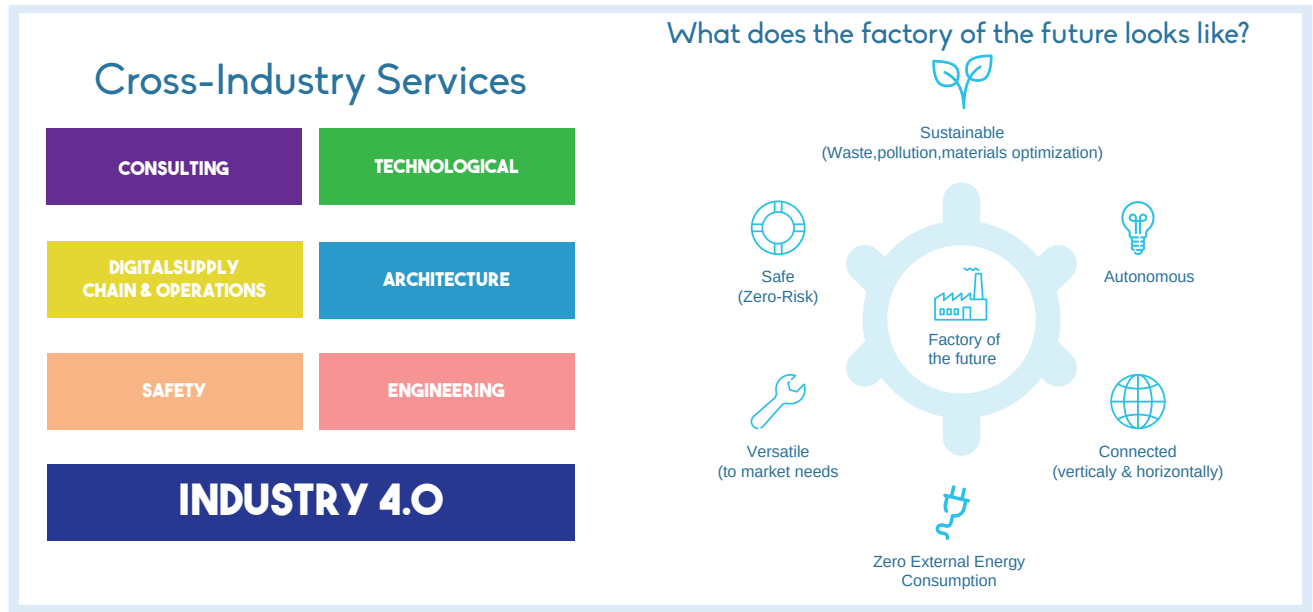
Group-IPS is your partner for project management, engineering, and a vast range of specialized services across all industries. A powerful combination of project-management expertise, engineering, and event-driven architecture allows us to generate promising paths to the future, even when faced with complex challenges.



...with expert project management, engineering and innovation...

Our innovation-driven approach, combined with a strong background in technology, enables us to revolutionize manufacturing processes, and even improve products, for a vast array of businesses.

In the years ahead, our scientific expertise and mastery in emerging technologies will transform the way our customers build and use the factories of the future.



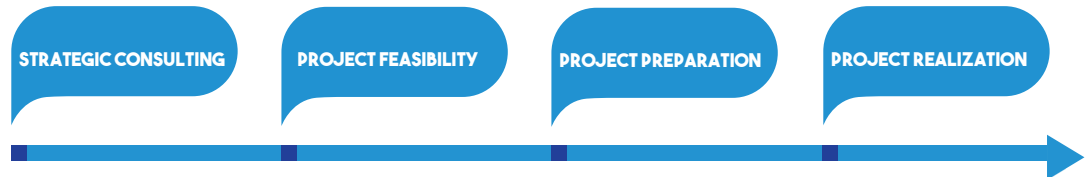
...from the first spark of inspiration, to the final moment of production.

Group-IPS dedicated staff is committed to turning possibility into reality and making the most of your investments.

For management, execution, advise, assistance, consultancy, or any other form of support across the lifespan of a project, IPS stands at the ready for you and your team.

We act as Owner's Representative for our customers, providing services exclusively to owners and investors.

This allows us to remain independent from the contractors' and suppliers' market and to prioritize customers' long-term performance.



Group-IPS acts as Owner's Representative and as your EPCM contractor

Group-IPS manages your industrial project from the initial idea until production. Since 1992 **Group-IPS** successfully realized more than 3000 projects - from technical adjustments and modernization projects to the construction of complete new production facilities.



Businesses who choose **Group-IPS** enjoy immeasurable added value and an array of additional benefits, thanks to our depth of expertise and breadth of professional insights.

Group - IPS

Industrial Projects Services

Smarter budgeting.

Traditional contractors often over-promise and surprise their customers with unforeseen costs. When unexpected changes do occur, Group-IPS project managers are better equipped to adapt to change and remain on budget.

Greater flexibility

Group-IPS cross-industry service providers each employ the same methodology that makes IPS a project-management powerhouse, allowing for more adaptability as a project progresses.

Clearer communication.

Because all team members are trained in project management and employ IPS methodology, team communication is fluid and each team member understands the others' needs.

More context.

Many customers are prepared to invest in boosting their production but aren't able to envision the most effective environment in which to do so. Group-IPS brings cross-industrial knowledge and experience to every one of its customers.

Improved alignment

With equal parts design, engineering, process, and management expertise, Group-IPS ensures that all parts of the project work in tandem.



DIGITAL SUPPLY CHAIN & OPERATIONS

Smart, Leaner, Better Facilities

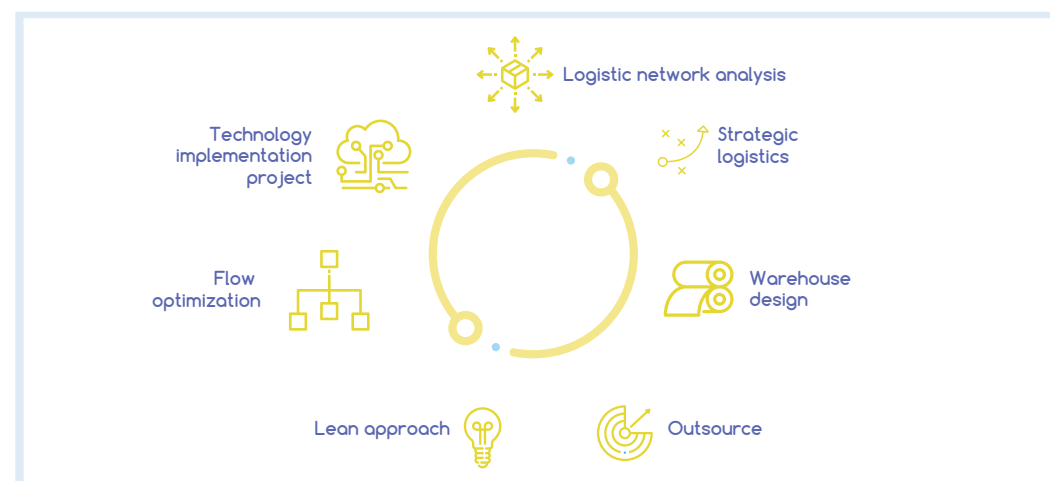
In order to make competitive improvements to your business, it's necessary to analyze, redesign, and optimize processes and supply chains.

Drawing on over 30 years of experience, Group-IPS takes into account the Industrial cost structure of your factories to make the most of the operational expenses, including energy, logistics, people, and materials. The outcome is a lean and high-tech facility with the capacity to carry your business well into the future.

- Analyzing, redesigning, and optimizing processes to make competitive improvements;
- Making the most of operational expenses, incl. energy, logistics, people, and materials;
- Fair and detailed procurement-guaranteeing the best possible pricing;
- Strategic software, tools, and technologies for optimal performance.

Areas of focus

- Logistic network analysis & site strategic logistics Flow optimization;
- 3D simulation;
- Warehouse design;
- Outsourcing studies;
- Technology implementation projects.



ARCHITECTURE

Intelligently engineered design.

INVESTMENT ANALYSIS

PROJECT MANAGEMENT

DESIGN

Arquid, the cross-industry architectural arm of Group-IPS, employs more than 20 skilled architects with highly diversified backgrounds, each extensively trained in IPS project management methodology.

Acting as Owner's Representative, the Arquid team begins each project with a highly detailed logistical analysis that results in your project plan.

While most major architectural practices assign one or two individuals to lead a job, Arquid then opens up each project to a company-wide brainstorming session, holding an internal competition to gather building concepts.

Customers are encouraged to provide feedback and ideas throughout the entire process, enabling them to challenge the team and push the project design even further.

As a team of highly trained project management professionals, the group strives for constructive synergy between architecture (conceptual thinking) and engineering (analytical thinking).

Group-IPS promises solutions backed by proven project-management insight.

- More flexibility;
- Improved alignment;
- Better design;
- Greater awareness;
- Added value.





SAFETY

Total compliance, right from the start

INVESTMENT ANALYSIS

PROJECT MANAGMENT

DESIGN

Safety Engineering

SEVESO ,ATEX, CE, HAZOP, RISK ANALYSIS,
SAFETY COORDINATION CONCEPT ,
HACCP ENVIRONMENT , SECURITY ,
RISK ASSESSMENT PER INDUSTRY ,
PREVENTION ADVISOR , FMECA KAIZEN,
CUSTOMER-SPECIFIC TRAINING.

Safety Realization

SAFETY COORDINATION REALIZATION,
CONSTRUCTION MANAGEMENT,
PREVENTION ADVISOR,
SITE SAFETY AND COORDINATION,
SAFETY ASSISTANT.

Safety Supervision

ACCESS CONTROL, DAILY/
WEEKLY REPORTING,
WORK PERMIT FOLLOW-UP.

Safety supervision has been a core service for IPS from our earliest days as a company.

But based on growing demand and in order to keep up with evolving protocol, we assembled a team to master the entire project life cycle.

With a focus on safety engineering in a project conceptual phase and safety coordination during the construction phase, our team assists customers in achieving worldwide legal and technical compliance.

All of our team members are trained with the unifying IPS methodology and bring extensive knowledge from various industrial sectors to each new project. We also help contractors develop and/or evolve their approach to health and safety at work, and we partner with our customers to further the skills and awareness of everyone on their teams.

- Total compliance, right from the start;
- Focus on safety engineering in the conceptual phase and safety coordination in the construction phase;
- Developing and/or evolving existing approaches to health and safety at work.



ENGINEERING

The heart of Group-IPS.

PROCESS

UTILITIES

CIVIL & STRUCTURE

MECHANICAL

PIPING

HVAC

ELECTRICITY

INSTRUMENTATION

AUTOMATION

TELECOMMUNICATION

Engineering lies at the core of all that we do at **Group-IPS**.

Over the years and in response to customer requests, our company has evolved to provide integrated, multi-disciplinary engineering services, giving us the ability to guide our customers seamlessly from the feasibility stage to project realization.

- Integrated basic and detailed engineering, from feasibility to realization;
- Extensive research and development to optimize facilities, processes, and products;
- Strengthening the link between process and operations, supply chain, safety engineering, and architectural design. Adding value, minimizing risk;
- Excellence Centers around the globe assist with local conditions;
- Boosting profit margins and building the “factories of the future”.

 **HIGH-ADDED-VALUE CONCEPT DESIGN**

 **PROJECT OBJECTIVES COME FIRST**

 **COMPETITIVE DETAILED ENGINEERING**

 **PROCESS SIMULATIONS**

 **INTEGRATED AUTOMATION PROCESSSS**

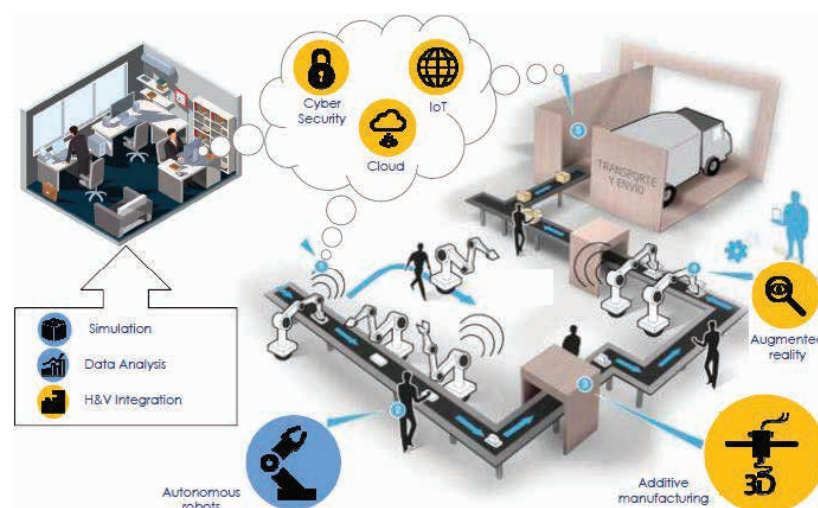
 **INERACTIVE 3D MODELING**



The future of industry is already here.
That's why **Group-IPS** is committed to transforming the facilities and processes of our to days's cutomers with the technology to perform above the competition for years to come.

IPS partners with customers to identify the root causes of challenges and then implements smart technology and strategy, eliminating inefficiencies and opening up new, and sustainable business opportunities.

Our goal is to build the “factories of the future”: sustainable workplaces with zero external energy-consumption where efficiency is optimized and employees thrive.



We employ technology that mediates seamlessly between the digital and physical worlds, reducing costs, improving flexibility,boosting profit margins, and creating additional and lasting value, among many other benefits.

Every company requires a unique approach, and every industry demands specialized expertise. With more than 30 years of in-depth experience solving complex challenges across all industries, IPS is the ideal partner to help you make the most of your investments, boost your capabilities, and put powerful technologies to work. IPS promises ongoing support, including the coordination of suppliers and utilities providers, so our customers continue to flourish well after our collaboration comes to an end

Expertise in a big range of industries

Our multi-disciplinary team of more than 250 highly skilled project engineers and architects as well as 50 drafters and project assistants allows us to realize projects in diverse fields of engineering and industries.

ISO Certifications



Project management training

Successful projects begin with perfect preparation. **8** in **Group-IPS** customers taking their businesses to the next level.

Sharing our experience gathered in more than 30 years, we provide participants with knowledge and tools to successfully prepare and manage their industrial projects in a cost-effective, time-efficient manner and to work proactively within a team.

Every day starts with theoretical classes to provide basic background knowledge and to present all required methods,documents and tools .

In the afternoon, the participants work in teams on a case study, first preparing and later presenting different tasks.

At the end of the training week, the participants have a clear picture of all steps necessary for the successful preparation of an industrial project, ready for the realization phase.



Industry



Industrial Plants

Whether you manufacture cars or part of its components, airplanes, electrical components or white goods, **Group-IPS** approaches your manufacturing project by gathering a full detailed understanding of your processes, technologies offered on the market and logistical requirements.

Our layout engineering prototypes your factory in 2D and 3D in parallel to elaborating a detailed project definition and budget.

Our highly efficient project management methodology guarantees an extremely fast construction time and an optimal cost.

We therefore provide our customers with sufficient time to elaborate their project ideas.

All industrial plants require a complex and a combination of many engineering disciplines, from civil and structural engineering, to electrical instrumentation and automation system.

Group-IPS has the required competences to manage all industrial projects needs throughout the creation of a synergy between our competence units:

- Automotive;
- Electrical Components;
- Consumer Goods;
- Bricks Industry;
- Ceramic Industry;
- Glass Plants.





Chemical & Fertilizer

Group-IPS executes chemical and petrochemical projects, providing project management and process-technology solutions that span the lifecycle of a facility. Our experts work around the clock to support project development and execution.

- Sulphuric acid Plants (with or without HRS system);
- Sulphur Fusion and Filtration Unit;
- Liquid Sulphur storage tanks;
- Phosphoric Acid Plants;
- Concentration of phosphoric acids;
- Di-ammonium phosphate DAP Plants;
- Mono-ammonium Phosphate MAP Plants;
- Triple Superphosphate TSP, Single Superphosphate SSP Plants;
- Ammonium Storage and distribution Facilities;
- Phosphate Pulp Unit;
- Minerals chemical attack: DH Process (dehydrate);
- Physical separation of phases by Filtration;
- Material handling by conveyor belts, railway, road, etc..

Through proprietary know-how and in association with leading technologies and the most reputed worldwide licensors, IPS's engineering capability embraces a wide spectrum of:

- Nitrogenous Fertilizers: Ammonia, Urea, Ammonium sulfate;
- Basic chemical & Raw materials: Nitric Acid, Caustic soda, Soda ash, Hydrogen generation.



Cement & Lime

Cement Plant

GRINDING AND HOMOGENIZATION

- Raw Material Handling;
- Grinding & Dynamic Separation;
- Fine Material homogenizing & storage silos.

MATERIAL HANDLING, INTERIM STORAGE AND BLENDING

- Belt conveyor;
- Blending beds/storage facilities;
- Stacker and reclaimer.

CEMENT GRINDING, STORAGE, LOADING AND CONTROL SYSTEM

- Cement Grinding systems;
- Cement handling;
- Finished cement storage silos;
- Cement loading facilities;
- Optimization & control systems.

CLINKER COOLING, STORAGE

- Clinker cooler and filter;
- Heat recovery ducts;
- Clinker store/silos.

PREHEATING AND BURNING

- Preheating tower;
- Rotating Kiln;
- Ducts and stack for gas treatment systems.

Lime Plant

CRUSHING & RAW MATERIAL HANDLING

- Limestone Crushing and screening units;
- Limestone handling by belts conveyor.

UNLOADING STATION & STONE RECEIVING TOWER

- Limestone unloading station;
- De-dusting units;
- Vibrating screen, vibrating feeders; and weighing bins;
- Intermediate stone storage silos.

HEATING PROCESS

- Vertical kiln
- Structure and ducts;
- Gasoil, Gas Stations;
- Collecting hoppers.

LIME LINE & UTILITIES

- Lime storage tower & storage silos;
- Truck loading systems;
- Product sampling;
- Optimization & control systems.



Petrochemicals, Oil & Gas Processing facilities

Group-IPS experience and commitment to excellence means that our Oil & Gas production customers can be confident that we will manage their assets safely and deliver their projects on time and on budget. We have significant expertise in Oil & Gas projects:

- Upstream;
- Midstream (usually included in the downstream category);
- Downstream.

GAS OIL SEPARATION UNITS

- Three Phases & Two Phases Separation Units;
- Condensate Stabilization Unit;
- Dehydration Unit: Electrostatic, TEG, Molecular Sieve, etc..;
- Gas Sweetening Unit: DEA, MEA, MDEA, etc..;
- Mercury Removal Unit: Non regenerative Mercury Guard Bed;
- Gas Refrigeration Unit: Single and Double Stage Screw Compressor;
- Filtration Packages: Gas Coalescer, Particulate Filters, Liquid Filters, etc..;
- Compression Units: Alternative & Centrifugal Compression Units.

STORAGE & FLARING FACILITIES

- Crude Storage Farms;
- LPG Storage Facilities: Sphere, Mounded Bullets;
- Gasoline, diesel & Kerosene Storage Farms;
- Fire Fighting Extinguishment & Detection Installation
- Flaring Installation; Burn Pit Flare System & Elevated Flare System.



LIQUEFIED PETROLEUM GAS LPG

- Gas & Condensate Drying;
- Deethanizer Columns;
- Depropanizer Columns;
- Debutanizer Columns.

PETROCHEMICALS

- Plastics;
- Refinery;
- Lubricant;
- Resin / Solvent;
- MEK / MTBF.

FLOW LINES

- Well Head Control Panel;
- Flow Lines Design;
- Manifolds Design;
- Water Injection System Design.



Mining

In the field of geology, mining and mineral processing, **Group-IPS** is an expert in the identification of raw materials and their linkage, evaluation of reserves and grades of different ferrous and non-ferrous deposits, development of mines, conceptual development, system design and selection of equipment for beneficiation plants.

Equipped with modern facilities including versatile geo-mining and mineral simulation softwares, **Group-IPS** provides consultancy services for a wide range of projects covering metallic and non-metallic minerals: iron ore, coal, diamond, manganese, ore, chromite, uranium, bauxite, limestone, dolomite and quartzite etc..



Mining services:

- Geology, Hydrogeology and Geotechnical Studies;
- Hydrology and Environmental Studies;
- Technical Due Diligence and Bankable study;
- Infrastructure & Process treatment Plant design;
- Conceptual, Pre-Feasibility and Feasibility Studies;
- EPCM (FEED, Basic & Detailed Engineering Services and Operational Engineering Support);
- Tendering, Procurement and Contract Administration;
- Valuation & Least Cost Investment Planning;
- Operational Engineering Support.

Group-IPS has significant experience in all aspects of Open Pit and underground Mining Engineering Consulting.

Our experienced team can develop, implement, manage and optimize your technical services department; provide pit optimization and mine design, as well as planning and scheduling; improve your existing operational set-up; and provide short or long term operational support.



Primary, Metal Industry

Companies in primaries are often confronted with large revamp or modernization projects, which has become one of our core business activities within the industry.

Our project management methodology guarantees that such revamps are executed in the shortest time possible with long-term satisfaction, and our team is committed to devising ecologically sustainable processes whenever and wherever possible.

Thanks to our innovative approach, our customers have set world records within the industry.



Group-IPS offers a wide range of consultancy services for the Iron and Steel sector.

The services range from preparation of site selection reports, market study reports, feasibility study reports, environmental impact assessment reports, detailed project reports, investment advisory services, design and engineering services, technical and commercial bid evaluation, supervision and monitoring of construction to operations improvement services

Metal Industry Expertise:

- Raw material preparation , Iron Making;
- Iron Ore & Coke Making;
- Foundry & Melting;
- Blast and Electric Arc Furnace;
- Casting (Thick and Thin Casters);
- Rolling Mills (Cold, Reversing and Finishing Mills);
- Processing Lines;
- Coating and finishing lines;
- Annealing Treatment.





Automotive Industry

The automotive industry is recalibrating its entire value chain. The increasing integration of equipment manufacturers, the reliance of players on new technological components and the growing importance of producing near to its consumers makes the management of its production sites more complex.

Group-IPS, with strong expertise in terms of both consultancy and product/process engineering, help automotive manufacturers and parts/component manufacturers develop their innovative projects.

We intervene in the following areas:

- Automotive plant design and construction management;
- Assembly solutions for automotive manufacturing;
- Vehicle components modeling;
- CAD design engineering;
- Structural engineering;
- Electrical systems design;
- Energy management, fuel economy & driving performance;
- Weight optimization;
- Prototyping services.

Vehicle automotive

Knowing how critical every production minute can be. That's why we begin by embedding ourselves with your team to gain a precise understanding of your unique needs and to provide you a tailored solution to develop flexible, efficient and sustainable automotive production solution, likewise product development, plant engineering, production plant development.

Our team adapts to your way of working with an eye toward eliminating downtime and preventing delays.



Aerospace automotive

GROUP-IPS puts at the service of aeronautics manufacturers, its proven expertise in the fields of 3D design, 2D/3D migrations, meshing of composite structures and metal structures, structural stress analysis studies, and finite element numerical computations.

The solutions we bring to our customers measure up to their expectations.



Rail automotive

Whether our customers are looking to develop new regional transport plans, introduce low-emission technologies or improve the journey experience for their customers, we bridge the divide between core engineering disciplines and the economic and environmental challenges of rail transport.



Naval automotive

We understand manufacturing and industrial engineering and how to integrate your technology, processes, and people to manufacture products and take your operations to the next level.

We have a long tenure providing world class manufacturing solutions in naval construction.





Agro-Industry, Food & Beverages

Group-IPS support our worldwide operating food and beverage customers in their international development. Starting from the master plan elaboration. **Group-IPS** define a list of projects related to the business development of our customers.

Group-IPS act as Owner's Representative and provide full EPCM (Engineering, Procurement and Construction Management) Services for all size of greenfield or brownfield projects.

Our Process Engineering Competence Unit is responsible for the elaboration of the P&ID's and process descriptions and the purchase of the process equipment. Our Competence Unit Architecture and Infrastructure, takes care of the buildings and the infrastructure and the Competence Unit Industrialization defines and manages the electrical and automation systems.

Group-IPS has a reference track record in realizing factories producing a large variety of foods and beverages such as:

- Cacao & Chocolate Industry;
- Beverages Industry;
- Sugar Industry;
- Natural Rubber;
- Dairy industry Slaughterhouse;
- Animal Feeding Plant;
- Vegetable Oil Plant Sausage Production Facility.





Life sciences

More than 30 years of experience in the pharmaceutical industry.

- Biotechnology
- Pharmaceuticals
- Medical devices
- Cosmetics

Group-IPS has built a strong reputation as an Owner's representative in critical projects in the pharmaceutical and biopharmaceutical industry, from design conceptualization until qualification.

Areas of focus

- Vaccines and medicines production;
- R&D or QC labs within the primary or secondary sectors.

Businesses who choose Group-IPS benefit from immeasurable added value and an array of additional advantages.

- Our multidisciplinary business unit works well under pressure and under many constraints.
- Readily conforms with GMP standards.
- Our architectural approach optimizes the product, people, and waste logistics as well as energy efficiency.
- Many specializations including logistical studies and Master Plans for the coming 10-20 years.
- Our added value lies not only in finding cost-effective but also 100% of reliable and safe solutions for the manufacturing process, utilities, and infrastructure.





Real Estate

Group-IPS employs more than 30 skilled architects with highly diversified backgrounds in a strong international competence unit.

Besides being responsible for the architectural design of our industrial projects, this competence unit has specialized in Corporate Headquarters, R&D Centers & Laboratories and built to purpose office buildings as well as business & conference hotels, Retail & Residential.

Our unique approach guarantees the long term customer and user satisfaction of such buildings.

Combining the architectural functions with the function of Owner's Representative, we elaborate a highly detailed logistical analysis which results in the program of your project.

In the next step we organize an internal contest to obtain different building concepts respecting the program and the logistics.

An internal user team makes a preselection and optimizes the designs after which the best two are presented to the customer for decision. The customer is systematically involved in all steps in order to enable him to challenge the designs in relation to his requirements and new thoughts.

During all steps [we are striving for a constructive synergy between architecture \(conceptual thinking\) and engineering \(analytical thinking\).](#)

Our own two corporate office buildings are a nice example of our approach. Both buildings integrate exactly the same functionalities and possible uses: office space for 70 employees, central back-office, printer and server rooms, multimedia room, project rooms, conference center for up to 300 participants, concert and recording hall(s), Event center enabling professional gala dinners for up to 200 people.

Both buildings have a totally different architectural design though with one statement in common: Transparency.



Infrastructure



Group-IPS is involved in all phases of project development: expertise, identification of issues, modeling and simulation on mathematical and numerical models, feasibility studies, preliminary studies, basic and detailed studies, execution studies, strategic studies (master plans, Action plans, etc)... , Preparation of tender documents, customer support in terms of monitoring, control and supervision of works, technical assistance and training.

Water Supply networks

DRINKING WATER

Group-IPS is involved in the design and the hydraulic modeling of water catchment systems; supply and transfer lines; Storage and regulation tanks and Distribution networks: primary, secondary and tertiary.

Our mission consists also in the assessment of water resources and estimating the need for drinking water in the future, in both urban and rural areas, in addition to the calculation of the necessary storage volume and the sizing of the pumping stations:

- Water resources assessment;
- Projection of the population and the need for drinking water;
- Design and sizing of networks (supply & distribution) as well as sizing of storage and regulation tanks;
- Hydraulic modeling in steady state and in transient mode using very sophisticated software;
- Design and modeling of pumping and dewatering stations;
- Analysis of water quality ...;
- Development of environmental and social impact studies.

IRRIGATION

Group-IPS provides the design and the hydraulic modeling of irrigation networks and the hydro-agricultural development networks.

Our mission includes:

- Water resources assessment;
- Dimensioning of Irrigation infrastructure (structures and equipments);
- Calculation of the necessary storage volume;
- Sizing of the pumping stations;
- Hydraulic modeling in steady state and in transient mode;
- Condition assessment and asset management;
- Optimization and resiliency planning;
- Rate planning;
- Environmental studies, utility coordination, identification of easements and right-of-ways.

Wastewater Sanitation

SEWERAGE NETWORK

Our mission is to collect wastewater via sewerage networks and transport it to wastewater treatment plants and discharge points.

- Population projection and estimate of discharged water flows (average flows and peak-flows);
- Design and modeling of the collection network using very sophisticated software to calculate the various parameters inside the network: flow rates, velocity, Froude number, traction force, velocity inside manholes;
- Design and modeling of possible pumping stations;
- The conduct of topographical and geotechnical campaigns;
- Development of environmental and social impact studies.

WASTEWATER TREATMENT PLANT

Group-IPS provides several studies and services in the context of Sewerage treatment plants :

- Design of purification stations;
- Water and sludge treatment;
- Design of pumping systems, pumping stations, pipelines, force mains, or sewers for the collection of wastewater;
- Calculate Tanks, clarifiers and Aeration Basins;
- Conduct feasibility studies for the construction of facilities, Asset management;
- Choice of the appropriate purification process based on the quality of the raw water;
- Choice of the types of treatment necessary for the reuse of treated water.

DRINKING WATER TREATMENT

Group-IPS has experience in making water safe that will be delivered to municipalities and government entities, and high-quality process water – including ultrapure water – to industries. From conventional to state-of-the-art technologies, our expertise encompasses the following treatment plants, and more:

- Conventional public supply for large or small rural populations;
- Flotation and dehydration techniques;
- Treatment of sludges generated by potable water operations;
- Physical-chemical treatment;
- Conventional public supply for large or small rural populations;
- Flotation and dehydration techniques;
- Treatment of sludges generated by potable water operations;
- Physical-chemical treatment.

INDUSTRIAL WATER TREATMENT

An industrial water treatment system treats water so it is more appropriate for a given use, whether for consumption, manufacturing, or even disposal.

That said, each system will vary depending on the facility's needs and many of the technologies that make up these systems can be similar. In general, some of the most-needed industrial water treatment systems typically include:

- Raw water treatment systems;
- Boiler feed water treatment systems;
- Cooling tower water treatment systems;
- Wastewater treatment systems.

Industrial Wastewater Treatment Plants:

- Polyelectrolyte dosing system;
- Physical-chemical treatments (decanting, flotation, filtration,).. ;
- Demineralization (Ion Exchange, Reverse osmosis, electrode ionization,).. ;
- Biomass reactor;
- Membrane bioreactor;
- Thermal drying of sludges associated with electrical generation plants.

WATER DESALINATION

The scarcity of freshwater resources and the need for additional water supplies is already critical in many arid regions in the world and will be increasingly important in the future.

- Reverse osmosis;
- Multi-stage flash (MSF) evaporation;
- Multi effect distillation (MED);
- Vapor compression (VC);
- Micro filtration (MF).

STORM WATER DRAINAGE

- Hydrological study and delimitation of watersheds;
- Estimation of floods using several methods;
- Design and modeling of the collection network using very sophisticated software allowing the calculation of the various parameters inside the network: flow rates, speed, froude number, traction force, speed inside manholes;..
- Design and modeling of possible pumping stations;
- Design and modeling of possible retention basins;
- Definition of the discharge point ...

RIVER HYDRAULIC

- Development study;
- Hydrological study and flood estimation;
- Flood protection study;
- Early warning system;
- Development of river banks;
- 1D and 2D numerical modeling;
- Environmental and social impact study ...

DAMS

- Conduct of geological and geotechnical campaigns;
- Hydrological & climatic study and flood estimation;
- Structural study of the different structures;
- Stability study;
- Establishment of execution plans;
- Management and coordination of works.





Transportation

Group-IPS is your partner for world-class engineering and technical innovation for the successful implementation of all below types of Transportation projects.

In terms of infrastructure engineering and management, **Group-IPS** interventions cover the different stages of the project cycle, from identification, feasibility studies, to works supervision: Basic Studies; Technical Assistance; Management, Monitoring and Control of Works; Behavior Observation and Auscultation; Work Safety Analysis; Risk Analysis; Works Rehabilitation Study...

URBAN TRANSPORT.

Urban transport is the first variable in opening up and development, which has prompted us to place this territory at the center of our activities. The diversity of the issues we deal with in this area has led us to constantly seek new skills and to expand our know-how and our geographic area of intervention.

Today our clients entrust us with their most complex and delicate projects.

RAIL TRANSPORT

Group-IPS transit design engineering experience includes conducting feasibility studies, overseeing station rehabilitation, and designing commuter parking facilities.

Group-IPS also provides construction administration services for transit projects, which encompass bridges, train sheds, storage facilities, rail yards, rail segments and stations.

ROADWAYS AND HIGHWAYS TRANSPORT

From large-scale reconstruction of multi-lane freeways / highways to improving local intersections,

Group-IPS maintains engineers who are familiar with the requirements of road infrastructure projects.

Our team creates safe, creative and functional roads and highways that enrich local and interstate communities.

BRIDGES AND TUNNELS

The studies of these projects are developed on the basis of specific calculation methods, the most recent regulations, and taking into account the most appropriate execution techniques.

RIVER AND MARITIME TRANSPORT, WATERWAYS

River and maritime transport is considered as "funnels" to economic development since they act as a catalyst and incite development to take place in specific economic sectors and locations near ports or along corridors.

Group-IPS is involved in the design and modeling of River and maritime transport with an extensive experience in carrying out coastal dynamic's studies, risk assessment and wave forecasting: we carry out analyzes of agitation in ports as well as studies of long-period wave phenomena, tides and currents, winds, etc...

AIR TRANSPORT

Group-IPS is rapidly expanding aviation practice that encompasses several aspects of airport development including planning, runway design, site design services, airfield design, and roadway access.

We offer specialized capabilities in the drainage design for airport systems and in the area of storm water management .

Group-IPS provides design, construction management services for terminals, runways, perimeter roads and other facilities to expand capacity and improve operations.





Energy

Group-IPS is your partner for worldwide engineering and technical innovation for successful implementation of strategic consulting, project feasibility, project preparation and EPCM of all types of energy and gas projects worldwide.

Types of energy:

Power Generation

- Gas Fired Power Plants;
- Steam Power Plants;
- Combustion Engines;
- Waste to Energy;
- Biomass;
- Cogeneration & Trigeneration.

Renewable Energies

- Solar PV and CSP;
- On- & Offshore Wind farms;
- Marine Solutions & Hydroelectric energy;
- Geothermal Energy;
- Bio to Energy;
- Hydrogen Energy.

Power Transmission & Distribution

- High-Voltage Transmission;
- Distribution & Rural Electrification;
- Substations;
- Smart Grids and Advanced Metering Systems;
- Network Control, Information Technology;
- Energy Storage System.





Agriculture

The core members of **Group-IPS**, together with the associate network offer a wide spectrum of services to the agricultural industry. Scientific and technological know-how must be applied to rural and agricultural development without losing sight of either the economic and social framework or the premise of sustainability. All these factors play a decisive role in making the agricultural sector more competitive to achieve higher production yields, and contributing to local economic and social development.

Urban irrigation design

Our mission is to be industry leaders in designing Water-Smart irrigation systems that allow landscapes to thrive and grow abundant while reducing water usage.

Definition and implementation of Rural Development Programmes

Group-IPS do effective approaches for Rural Development .Our goal of rural development is a sustainable improvement of livelihood for rural people.

Economic and sectoral studies (quantitative and qualitative analysis)

In today's agricultural economy, farmers are constantly looking for additional information about risk management, technology, input strategies and more.

Our faculty are engaged in research that helps farmers, and the agriculture industry as a whole, understand trends and make informed choices. We also look at the impact on agriculture of labor markets, technology, population trends, climate change and increasingly complex trade policies.

Technical assistance to site management

With a technical assistance we help producers understand and use new technologies and methods. Our technical specialists draw up a step-by-step plans with producers and do regular visits to the farm or facility.

Agricultural sector support services (value chain, food security)

We offer a value chain analysis (VCA) so that the actors can make informed choices. As we know that the economic value of agriculture production is multiplied if the value chain of the product is strong, efficient and sustainable.



Sustainability & Environment

Sustainability

Achieving the SDGs will create a world that is more sustainable, equitable, and prosperous. In order to get there, we must adapt our strategies to deliver not only financial results, but positive social and environmental outcomes as well.

Our goal is to support our customers towards carbon neutralization by offering:

- Carbon footprint assessment;
- Life cycle analysis of products, materials, buildings and services
- Environmental certifications and well-being of buildings: HQE, LEED, BREEAM
- Life cycle analysis of products, materials, buildings and services;
- Monitoring of green projects and reduction of nuisances



Environment

As the world faces extraordinary challenges from climate change, delivering on our purpose has become more critical than ever before.

With a global footprint and local presence, **GROUP-IPS** provides good environmental management from the design to the operational phase.

Our environmental services (expertise)

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENTS (ESIA)

GROUP-IPS carry out the process of environmental and social assessments (screening, scoping, impact assessment, mitigation measures and actions).

ENVIRONMENTAL MONITORING

By using air quality monitoring systems, and indicators of water quality.

QUALITY MODELING

In our work in air quality modeling, we use the most commonly air quality models such as dispersion and photochemical modelling

NATURAL RESOURCES MANAGEMENT (NRM) AND BIODIVERSITY

Group-IPS put into service Natural Resource Management (NRM) which refers to the sustainable utilization of major natural resources such as : land, water, air, minerals, forests, fisheries, wild flora and fauna.

DRAINAGE AND INTEGRATED WATER MANAGEMENT

GROUP-IPS apply Integrated Water Resources Management in a cross-sectoral approach (agriculture, industry and contaminated municipal and industrial water).

WASTE MANAGEMENT AND TREATMENT OF CONTAMINATED SITES

- Circular Economy method (methods of 3 R'S) ;
- Methods of treatment of contaminated sites (chemical, physical and biological).

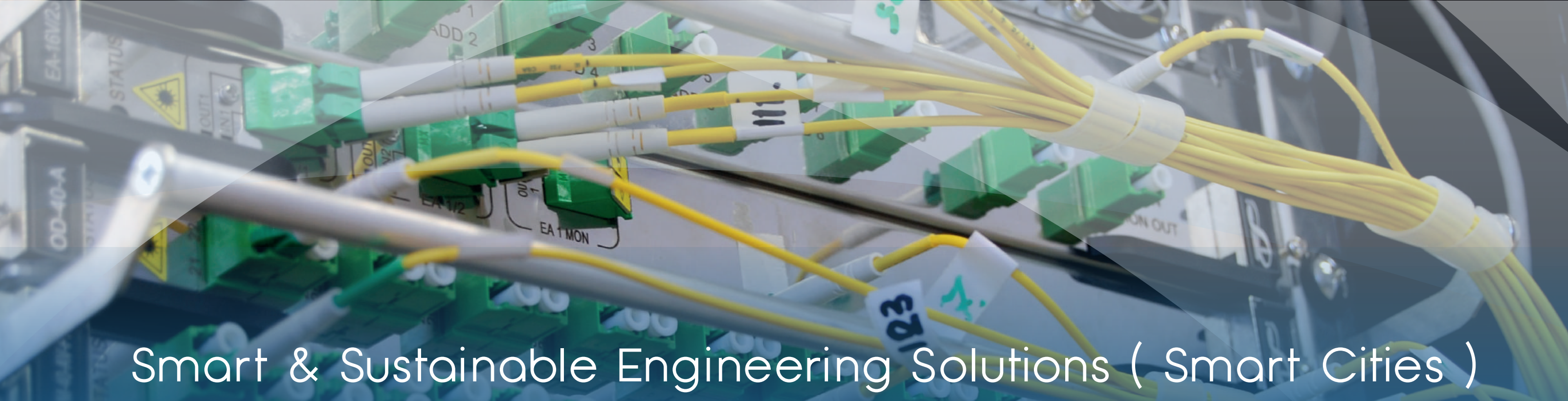
CLIMATE CHANGE RESILIENCE

- Mitigation strategies;
- Renewable energy sources like solar, wind, hydro power and hydrogen;
- Helping cities develop more sustainable transport such as bus rapid transit and electric vehicles...

DISASTER RISK MANAGEMENT

- Hurricane management;
- Wind and storm Surge management;
- Flooding management;
- Earthquake management;
- Fire fighting expertise management.





Smart & Sustainable Engineering Solutions (Smart Cities)

Group-IPS is always keeping up with innovative technology, understands the fast-paced smart and sustainable requirements, and presents smart engineering solutions to meet the needs of even the most demanding customers.

IPS delivers consultancy services in smart cities, smart ports, and all engineering smart solutions to its customers worldwide such NEOM Project in KSA and Smart Ports projects in Kuwait, and much more. IPS introduce a new model for engineering, urban sustainability powered by renewable energy. we adopt environmental responsibility principles and sustainable and regenerative development practices

FIBER SERVICES

Group IPS experience in fiber optics covers the entire cycle of the backbone of the internet, to the last mile of aerial and underground infrastructure utilizing single and multimode fiber.

- Fttx (FTTH, FTTLA, FTTB, FTTO, FTTN, FTTDP, FTTO) network designs;
- Feasibility analysis of architecture needs;
- Data collection, bid activities, construction oversight, inspections;
- Choice of routes and field surveys;
- Detailed engineering for the deployment of aerial and underground fiber optics cables;
- Pole line design;

- Negotiations on easements, right-of- ways and permits;
- Design of underground pipes;
- Preparation of RFP;
- Environmental studies;
- Work supervision.

DATA CENTER

Our technical expertise covers all phases of service and includes

- Data Centers Services;
- Information Technology (IT) Services;
- Low Current Services.

From strategy conception, feasibility studies and business case development, through to detailed data center design and construction, Data Centre Technologies technical insight and relationships underpin a strong reputation as a leading consultant between the technology and construction industries.

Group-IPS is involved in the design of the different components of a data center such as:

- Storage systems (data servers, disc bays, application servers etc);
- Calculation of network infrastructure (copper/fiber cabling, equipment);
- Network operations center (NOC), including communication and monitoring;
- Electricity distribution and generation systems (UPS, generators);
- Electrical power panels with overcurrent and overvoltage protection;
- Lighting systems;
- Earthing systems;
- Environmental control, ventilation and air conditioning systems;
- Fire extinguishing systems;
- Access control;
- Equipment cabinets and enclosures;
- Ducting, floating floors, suspended ceilings.

IT INFRASTRUCTURE

Group IPS provides consultancy and implementation services for global IT solutions from setting strategy to designing and implementing full solutions.

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|---|---|
| ■ Main Distribution Frame Design (MDF); | ■ Data Center Planning; |
| ■ Intermediate Distribution Frame (IDF); | ■ Voice Data Cabling Design; |
| ■ Telephony (analogue/digital/VOIP) Infrastructure; | ■ Wireless Applications; |
| ■ Communications Infrastructure and cabling; | ■ Peer Review Drawings; |
| ■ Electronic Signage Data Infrastructure; | ■ Network Cabling ,LAN, WAN & Security. |