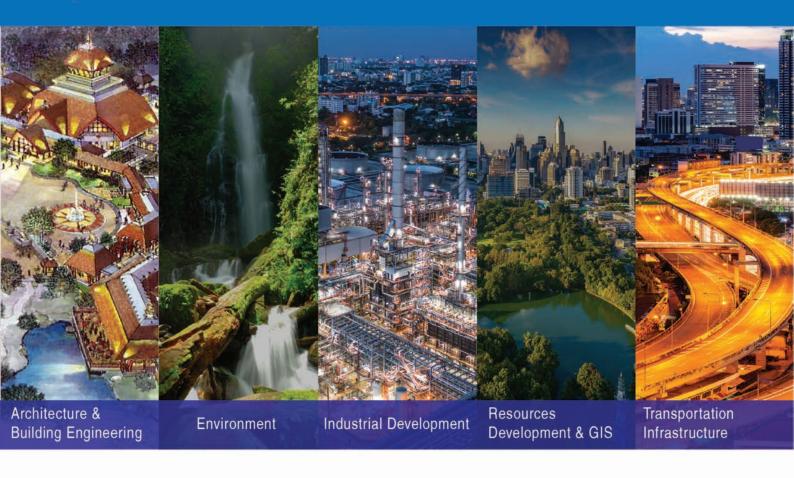
TESCO

Engineering, Architectural & Environmental Consultants



Over 40 years of engineering excellence and customer satisfaction

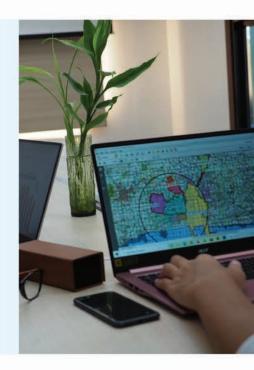
Company Overview

TESCO is a Thailand based multidisciplined engineering, architectural and environmental consulting firm founded in 1977.

Our 200-plus engineers, architects and support staff have successfully completed over 1500 projects.

TESCO provides technically sound and economically feasible engineering design solutions for local, international, public and private clients by planning, designing and supervising construction in the fields of transportation, resources, industry, environment and architecture

TESCO is not only active in Thailand but also in other Southeast Asian countries.



Construction
Management
and Supervision

Architecture & Building Engineering

- Residential and commercial buildings
- · Medical research laboratories
- Hypermarkets, multi-story structures
- Education buildings

Industrial Development

- Industrial plants
- Process design
- Power plants, electrical distribution systems

TESCO Core Competencies

Environment

- Environment and social impact studies
- Environmental management
- Geographic information system (GIS)

Resources

- Water resources and flood management
- · Water supply, waste and drainage
- Tourism, forestry, fisheries, agronomy, natural resources

Transportation Infrastructure

- Railways, mass transit, high speed rail
- · Roads, tunnels, bridges
- · Ports, harbors
- Airports

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Company Overview

TESCO Project Management Services

- · Preliminary & Planning Stage
 - Feasibility, financial evaluation, environmental impact
 - · Site survey, mapping & concept planning
- · Design Stage
 - · Basic design, detailed design, technical specifications
- Tender Stage
 - · Documentation preparation
 - Cost estimation
 - Tender evaluation
- Project Implementation Stage
 - Construction management & supervision





Professional Disciplines Offered at TESCO

- Architects & regional planners
- Civil engineers
- Structural engineers
- · Sanitary & HVAC engineers
- Transportation engineers
- Chemical engineers
- Geotechnical & resources engineers
- · Environmental specialists
- Sociologists
- · Economists & financial specialists
- CAD operators
- · Construction supervisors



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Architecture & Building Engineering

TESCO offers a full range of architectural, structural, mechanical and electrical engineering services from initial feasibility and cost studies to detailed design, specifications and construction supervision.

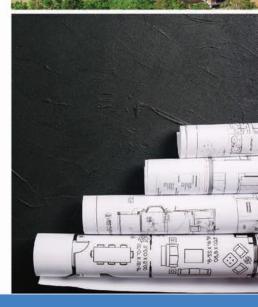
Areas of Expertise

- Commercial developments
 - Hotels
 - Hypermarkets
 - Office buildings
 - Resorts
- Public buildings
 - Hospitals and clinics
 - Aquariums
 - Multi-storey buildings
 - Schools
 - Medical research laboratories

- Residential developments
 - Housing schemes
 - Apartment blocks
 - Condominiums
 - Private residences







TESCO's strength comes from its wide-range of in-house expertise that include architects, structural, civil, mechanical, electrical and HVAC engineers. Together with TESCO's extensive expertise in Environmental Impact Assessment, we can offer a one-stop service package from initial planning to detailed design to construction management.

TESCO's registered architects and engineers are well acquainted with local and international building codes and regulations. Not only is our team qualified to sign for building permit applications we will see that your project runs smoothly, to schedule and at cost right from building design through to construction and site supervision.

Examples from more than 300 projects

- Crystal Design Center: detailed engineering design / construction management and supervision
- Chulalongkorn University: master plan
- Chiangmai Night Safari: design and construction supervision
- Centre Point Sukhumvit 34-storey apartment building: design
- Carrefour hypermarkets: architectural and engineering design of 11 branches
- Star Vegas Casino and resort, Cambodia
- American Embassy, Bangkok physical security upgrade: design
- US. Government medical and educational projects in Cambodia, Laos, Philippines and Indonesia

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Environment

TESCO has been accredited by the Thai Government to offer all aspects of environmental impact assessment and environmental planning not only for industrial projects but also for office buildings, resorts, hotels, ports, dams and reservoirs, thermal and hydro power plants, highways, agriculture projects and mines.

Areas of Expertise

- Land resources
 - Geology
 - Agricultural land use
 - Forestry watershed, Re-forestation
 - Wildlife preservation
- Water resources
 - Water quality & use
 - Ground water
 - Toxic residue testing
- Initial Environmental Examination (IEE)
- Environmental Import Assessment (EIA)
- Health Impact Assessment (HIA)
- Environmental Safety Assessment (ESA)

- Air quality & noise level
- Ecology & oceanography
 - Fisheries monitoring
 - Sedimentation & erosion
 - Species & habitat identification
- Socio-economics
 - Archaeological studies
 - Resettlement & compensation
- Waste management
 - Solid, liquid & toxic waste treatment, disposal & management, effluent & waste water pollution control

Our Range of Services Include

- Surveys & evaluation of existing environment
- Identification & evaluation of existing environmental impact
- Prediction of project influence
- Evaluation of sensitive areas
- Impact identification through environmental evaluation with & without the project





- Impact minimization proposals
- Impact monitoring measures
- Preparation of environmental impact mitigation plans (EIMP)
- Public participation & community surveys

Examples from more than 360 projects

- Supalai Plc. city home@ Srinakarin: EIA
- Plus Property Ltd. D condo (Onnut-Suvarnabhumi): EIA
- LPN Place Ratchayothin: EIA
- The Star Estate @ Narathiwas: EIA
- The Bangkok Horizon Ramkhamhaeng 60: EIA
- International student dormitory, Chulalongkorn University: EIA
- Nawamin Hospital: EIA

- Phatara Thonburi Hospital: EIA
- Rock salt mine project (solution mining): EIA
- TPI Polene Plc.'s power generation from hot exhaust gas from cement plant, Saraburi: EIA
- PTT Eastern Petroleum terminal jetty expansion and submarine pipeline project: EIA

Transportation Infrastructure

TESCO has an accomplished record of providing transportation infrastructure services at a local, regional and national level from feasibility stage through to commissioning and operation.

Areas of Expertise

- Highways
- Rural roads
- Municipal streets
- Expressways

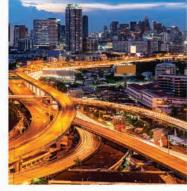
- Elevated railways systems
- Railways
- Underground railway systems
- Monorail systems

- Airports
- Tunnels
- Port & harbors
- Bridges

Our Range of Services Include

- Feasibility studies & policy recommendation
 - Feasibility studies
 - Evaluation of technical justification
 - Economic studies
 - Financial analysis & cost estimations
 - Environmental studies
 - Public private partnership policy development
- Site selection
 - Location studies
 - Field reconnaissance
 - Topographic mapping
 - Alternative site studies
- · Site investigation
 - Subsurface exploration
 - Construction materials surveys
 - Hydrological investigation

- Project design
 - Preliminary planning & design
 - Detailed design
 - Preparation of specifications, tender & contract documents
- Construction supervision
 - Onsite inspection
 - Construction scheduling
 - Soil & material testing
 - Budget control
 - Processing contractor payment







Examples from more than 110 projects

- Mass Rapid Transit Authority of Thailand rail project Blue, Green and Purple Line project
- Mass Rapid Transit, Bangkok Metropolitan Authority Gold Line project
- Motorway No.7, Bangkok-Chonburi: detailed design
- Maekong River crossing bridge (Houayxay, Laos-Chiangkong, Thailand): detailed design
- R11 Highway Project in Lao PDR: feasibility study and preliminary design
- Bangkok Monorail, Bangkok Metropolitan Authority: feasibility study, preliminary design and EIA
- Chaopraya River Crossing Bridge "Rachawong-Tha Dindang": detailed engineering design
- Double Track Railway Hua-Prachuap Khiri Khan Section, State Railway of Thailand: feasibility study and detailed engineering design

Resources Development & GIS

TESCO offers all aspects of resources engineering from initial appraisal, economic feasibility, engineering design and environmental impact studies to waste treatment and disposal. TESCO uses GIS as operation and assessment tools to help projects achieve a higher level of effectiveness. TESCO also helps clients use our engineering expertise in policy development.

Areas of Expertise

- Preliminary soil, water source & water requirement analyses
- · Environmental impact reports
- Water supply & irrigation design, project management, construction supervision & maintenance
- Hydrology
- Water supply pipelines
- Farm plants & economic evaluation
- Livestock selection
- Crop selection, diversity & cultivation needs
- Erosion protection
- Soil conservation & improvement
- Forestry & forest conservation
- · Freshwater & coastal marine aquaculture



Our Range of Services Include

- Resource appraisal
- Site investigation
- Feasibility studies
- Environmental socio impact studies
- Detail architectural & engineering design
- Project & construction management









Examples from more than 360 projects

- Department of Fisheries (DOF), Ranot Salt Water Drainage System, Songkhla: engineering design and tender document development
- Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy, Nam Mae Ngao mini hydro power project: feasibility, design, public participation, investment planning
- East Water Resources Development & Management Plc.'s Nong Plan Lai Map Ta Phut pipeline project, Rayong: engineering design, construction supervision and initial environment examination (IEE) study
- Royal Initiative Discovery Institute, Hua Klai Reservoir: Survey and Policy Planning using Geographic Information System
- Ministry of Tourism and Sport: studies and policy development of 5 tourism clusters
- Watershed Management for Water Quality Improvement (Southern Watershed), Office of Natural Resources and Environmental Policy and Planning

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Industrial Development

TESCO has particular expertise in the oil, pharmaceutical, plastics and paper processing industries. Due to the complexity of many industrial development projects involving many engineering disciplines and plant processes TESCO provides a complete project management service to ensure the successful completion of every project.



Areas of Expertise

- · Oil and gas projects
 - Oil & gas pipelines
 - Pumping stations
 - Liquid petroleum pipelines
 - Oil terminals & tank farms
- Petrochemical plants
- Pharmaceutical plants

- Pulp & paper mills
 - Power boiler plants
 - Industrial wastewater treatment plants
 - Chemical preparation facilities
 - Pulp storage, Warehouses & Logistic support facilities
 - Infrastructure facilities
- · Mining & mineral resources







Our Range of Services Include

- Site selection
- Feasibility & cost estimation
- · Environmental impact studies
- Hazard assessment
- Materials handling, production flow & process piping design
- · Expansion & upgrading of existing facilities
- Engineering design of factories & manufacturing plants
- Tender & contract documentation
- · Assist with permit applications
- · Liaison with local & industrial estate authorities
- Construction supervision & inspection

Examples from more than 180 projects

- Tetra Pak factory, Rayong
- ABB transformers factory extension, Samut Prakan
- Rhone-Poulenc factory extension, Samut Prakan
- ICI Asiatic Chemical Company Limited, Samut Prakan
- Troy Siam Company, Ladkrabang
- Bangkok Industrial Laminate Circuit Board Factory, Chachoengsao
- Siam Polyethylene Co., Ltd. (Dow Chemical), SPE II Project

Construction Management & Supervision

TESCO offers construction management and supervision in all its sectors of activity. From work sequence planning and on-site technical co-ordination to construction. TESCO is dedicated to ensuring safety, quality and cost control in all aspects of the construction process.

To achieve this TESCO can integrate all the above services to provide you with a full and comprehensive range of management and supervisory services to ensure the success of your project.

Our Range of Services Include

- Detailed design & preparation of bidding documents
- · Government & local authority permits acquisition
- · Pre-qualification of potential contractors
- Tendering & bid evaluation
- · Contractor selection with owner
- Contracting
- On site supervision & site management
- Testing of mechanical systems
- Commissioning
- · Inspecting & approving shop drawings









Examples

- Suvarnabhumi International Airport landside road system: construction supervision
- Suvarnabhumi International Airport Expansion Project (Fiscal Year 2011-2017): construction supervision
- New Parliament House of Thailand: construction management and supervision
- Udon Thani Industrial City: construction supervision
- Phuket International Airport (AOT), Staff housing: construction supervision
- AOT Head Office, The office building2: construction supervision

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Portfolio of Clients



Thai Government agencies

- · Airports of Thailand
- · Bangkok Metropolitan Administration
- CAT Telecom
- Department of Fisheries
- · Department of Highways
- · Department of Industrial Works
- . Department of Land Transport
- · Department of Mineral Resources
- · Department of National Park, Wildlife & Plant Conservation
- . Department of Public Works and Town & Country Planning
- · Department of Rural Roads

- Designated Areas for Sustainable Tourism Administration (DASTA)
- Electricity Generating Authority of Thailand
- · Expressway Authority of Thailand
- · Government Lottery Office
- · Krungthep Thanakom Co., Ltd.
- · Mahidol University
- Marine Department
- · Mass Rapid Transit Authority of Thailand
- · Ministry of Energy
- Ministry of Natural Resources and Environment
- National Housing Authority
- · Office of Environment Policy and Planning

- · Office of Transport & Traffic Policy and Planning (OTP)
- Pattaya City Administration
- Pollution Control Department
- · Property Management of Chulalongkorn University
- PTT Public Company Limited
- · Ramkhamhaeng University
- · Royal Forest Department
- · Royal Irrigation Department
- · State Railway of Thailand
- The Secretariat of The House of Representatives
- Treasury Department

International funding institutions

- Asian Development Bank (ADB)
- · Canadian International Development Agency (CIDA)
- French Foundation for Education
- International Bank for Reconstruction & Development (IBRD)
- Japan International Cooperation Agency (JICA)

- Naval facilities Engineering Command, U.S. Government (NAVFAC)
- Neighboring Countries Economic Development Cooperation Agency (NEDA)
- Overseas Economic Corporation Fund of Japan (OECP)
- · ROICC Thailand, U.S. Government, Thailand
- US Army Corps of Engineers (USACE)

Multi-national companies

- · Asea Brown Boveri Ltd.
- · Asia Terminal Co., Ltd.
- · Avery Dennison (Thailand) Ltd.
- · Bayer Premier Polycarbonate Co., Ltd.
- · Beiersdorf A.G.
- · Brenntag Ingredients (Thailand) PLC
- · British Petroleum/ Kuwait Oil Co., Ltd.
- · Caltex Thailand Co., Ltd.
- · CenCar Company Limited
- · Chevron (Thailand) Ltd.
- · Chiyoda Engineer Co., Ltd.
- · Dow Chemical Thailand Ltd.
- · East Asiatic Company (Thailand) Ltd.

- · Esso Standard Thailand Co., Ltd.
- . F.E.Zuellig (Thailand) Co., Ltd.
- · General Motors(Thailand) Ltd.
- · Global Steel Dust (Thailand) Co., Ltd.
- · Hyundai Engineering Construction Co., Ltd.
- · ICI Asiatic Chemical Co., Ltd.
- · Kao Co., Ltd.
- · Kobe Steel Co., Ltd.
- · Lepetit (Thailand) Ltd.
- Lycée Français International de Bangkok
- · May & Baker Ltd.
- · Myandawei Industrail Estate Holding Ple Ltd.
- · Nisshin Co., Ltd.
- · Pacific Plastics (Thailand) Ltd.

- · Pioneer Elastic (Thailand) Ltd.
- Polyplex (Thailand) Plc.
- · Rhône-Poulenc Thai Industries Co., Ltd.
- · S.K. Engineering and Construction Co., of Korea
- Shell Thailand
- · Shinho Paper Thailand Co., Ltd.
- · Solvay & Cie.
- Sungkyong Engineering & Construction Co., Ltd.
- · Surint Omya Chemicals Co., Ltd.
- Tetra Pak Manufacturing (Thai) Co., Ltd.
- Thai Sato/ Honda Car Thailand Ltd.
- · Triumph International Co., Ltd. · Troy Siam Co., Ltd.
- Warner-Lambert (Thailand) Ltd.

Thai companies

- · APEX Three Co., Ltd.
- · Bangkok Bank Public Co., Ltd.
- Bangkok Industrial Laminated Co., Ltd.
- · Bangkok Land PCL.
- · Banpu Power
- · Benjakij Development Co., Ltd.
- · Don Muang Tollway PLC.
- · Finnolar (Thailand) Ltd.
- ICI Asiatic Chemicals Co., Ltd.

- IRPC PCL.
- Italian-Thai Development PCL.
- · Jalaprathan Cement Plc
- · National Fertilizer Co., Ltd.
- · Padaeng Industries Plc.
- Patum Rice Mill and Granery Co., Ltd.
- · Penn Asia Co., Ltd.
- Phoenix Pulp & Paper Co., Ltd. (PPPC)
- · Ratta Paitoon Land and House Co., Ltd.

- · SCP Paper Public Co., Ltd.
- Siam Cement Group (SCG)
- · Siam Furukawa Co., Ltd.
- · Siam Kraft Industry Co., Ltd.
- · Siam Steel Co., Ltd.
- Thai Cane Paper Co., Ltd.
- · Thai Glass Industries Co., Ltd.
- Thai Kraft Paper Industries Co., Ltd.
- · Thai Paper Co., Ltd.





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