

# Lucke Consulting Technology Services, LLC

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## Services and Capabilities Statement



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[www.luckeconsulting.com](http://www.luckeconsulting.com) (work in progress)

### LCTS Vision Statement

LCTS strives to be a premier engineering and technology consultancy serving small and mid-sized businesses, capital project teams, financial institutes and government agencies, delivering innovative and inventive technical and business advisory solutions through collaboration, professionalism and exceptional client service.

### LCTS Mission Statement

Our mission is to provide world-class technical and business consulting solutions and expertise to our clients, enabling them to achieve their long-term technological, economic and operational vision. Our objective every day is to help our clients make substantial improvements in their business performance and to add maximum value to their organizations.

### LCTS BUSINESS PRINCIPLES & STANDARDS

Our company is built on the values of safety, honesty, integrity, professionalism, teamwork, client service and excellence. These values are deeply rooted in our company's culture and help us in providing the best service possible to our clients.

### Services and Capabilities

The following paragraphs summarize the services and capabilities offered by LCTS and serve as general information to identify potential opportunities. Details and specifics of any services can be customized and discussed in more detail once an opportunity is identified.

#### Heavy Oil Processing – Bottom of the Barrel

These Heavy Oil Processes are supported by detailed knowledge and broad experience in design, construction, operation and monitoring:

- Delayed Coking
- Fluid-/Flexicoking
- Visbreaking
- Thermal Cracking
- H-Oil / LC-Fining
- R-FCC

### Other Refining Processes

Other refining processes covered are:

- Crude Oil Desalting / Atmospheric Distillation
- Vacuum Distillation
- Hydrotreating (general)
- Hydrocracking
- FCC
- Offsites/Utilities/Auxiliaries

### Petroleum Coke and Applications

LCTS provides extensive experience and knowledge in the area of petroleum coke handling and applications, including:

- Fuel Grade Coke
- Anode Grade Coke
- Needle or Premium Coke
- Coke Quality Optimization and Monitoring
- Coke Calcining

### Gas Monetization

- Gas-to-Liquids (Fischer-Tropsch)
- Liquefied Natural Gas (LNG)
- Liquefied Petroleum Gas (LPG)
- Compressed Natural Gas (CNG)
- Hydrogen Manufacturing
- Methanol Production
- Fertilizer Production

### Other Areas supported by LCTS

- Midstream – pipeline studies and hydraulic calculations
- Storage – tank farm concepts and studies
- Petrochemicals/Chemicals – feasibility and optimization studies; detailed knowledge in the area of calcium chloride processes
- Bio-Fuels
- Coal-to-Liquids (Gasification and Direct Digestion)

### Services provided for these areas

- Execution of Feasibility Studies, Yield Studies, Optimization Studies and Revamp Studies
- Execution of Operations and Process Improvement Audits – Benchmarking
- Preparation of Process Design Packages and Basic Engineering Packages
- Lead and/or Support FEED the preparation of FEED Packages and the execution of Detail Engineering Phases
- Start-up Support
- Lead/Support PFD Reviews, P&ID Reviews, Design Package Reviews and PHA/HAZOP
- Support Cost Estimates
- Project cost reporting and assessment
- Project progress reporting structures and assessment
- Project Management consulting

### Services provided through partnerships

- High Definition 3D Laser Scanning (Onshore and Offshore Facilities)
- 3D Intelligent Models (CADWorx and PDMS) for new and existing facilities
- Plant and Equipment Layouts
- Volumetric calculation of stockpile and land fills
- Tank Calibration
- Piping & Instrumentation Diagrams (P&IDs)
- Pipe Stress Analysis (CAESAR II Software)
- Fabrication and Isometric Spool Drawings
- Weld Mapping
- Pipe Support Design – Pipe Racks, Hangers, U-Clamps etc.
- CAD Training (AutoCAD, Revit Architecture, 3DS Max, CADWorx Plant Professional, CADWorx Fieldpipe, CADWorx P&ID, Caesar II, PV Elite, Tank, Leica Cyclone 9.0 and Edgewise Plant)
- Support and Sales on all Intergraph CADWorx and Analysis Solutions Software
- Support and Sales on all ClearEdge 3D Software
- Animation/Simulation
- Structural & Machinery Vibration Analysis
- Thermal Imaging or Infrared Thermography
- Piping Vibration Studies (Both FIV & AIV)

- Anti-Vibration Brace Design Consultancy
- Laser Shaft Alignment
- Oil, Coolant, Grease, Foam & Diesel Fuel Analysis
- Borescope Inspections
- Reliability Training
- Leak Trail & Moisture Detection
- Root Cause Failure Analysis (RCFA)
- Mechanical Repairs
- Bearing & Seal Replacement
- Fire & Gas Detection Systems

Lucke Consulting Technology Services, LLC  
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