

COGNITION

SMART ENGINEERING

Seamless Solution

About Cognition IES

Established in 2023, Cognition IES emerged as a pioneering engineering solutions provider with a unique vision. Starting with two visionary leaders in India, we have rapidly grown into an international organisation with operations in the United States.

Our foundation rests on a revolutionary concept by eliminating traditional hierarchies to create direct value channels between our expert engineers and clients. We provide comprehensive engineering solutions to global EPC companies and discrete manufacturing industries, including automotive, aerospace & defence, electronics, industrial machinery, heavy equipment, marine, and medical devices.

This innovative approach has enabled us to deliver superior engineering solutions while maintaining the agility and innovation of a startup.



Mission

To deliver innovative engineering solutions through a people-first approach, creating an organization where every team member directly contributes to value creation.

We are committed to providing high-quality engineering services while maintaining a flat, efficient organizational structure that empowers our employees and delivers exceptional results to our clients.

Vision

To become the preferred engineering partner for organizations seeking innovative solutions by building a new kind of engineering services company that thrives on self-driven teams and direct value creation.

We envision a future where engineering excellence is achieved through collaborative innovation, sustainable practices, and a flat organizational structure that maximizes efficiency and employee potential.

Key values & Differentiators

- Co-Innovation Partnering with customers to develop co-patents using our expert resources and domain knowledge.
- Full Lifecycle Support Driving sustainable growth through end-to-end product lifecycle management and support.
- Quality Commitment Building lasting partnerships through consistent quality, competitive costs, and reliable delivery.
- Flexible Scalability Adapting team size and accessing the latest technologies to match project needs and drive results.

Quick Facts

Global Presence

with offices in
India and US

50+

skilled engineers

65+

years combined
leadership expertise

ISO 9001

Certification

100% on-time

project delivery
rate

Value Proposition

- Our flat organisational structure fostering innovation and co-patent development
- Deep expertise in discrete manufacturing across automotive, aerospace, industrial machinery, and medical devices
- End-to-end product lifecycle support backed by continuous improvement services
- Cutting-edge digital capabilities with traditional engineering excellence
- Specialized capabilities in digital twins and smart manufacturing
- Flexible, scalable engagement models designed to quickly deliver measurable business value

Our Approach

Combining startup agility with seasoned expertise and delivering innovative engineering solutions.



Innovation Through Integration

- Proven leadership expertise with digital innovation
- Seamless extension of client engineering teams
- Flexible scaling with rapid decisions
- Co-patent development opportunities



People-Powered Value Creation

- Flat structure enabling direct collaboration
- Self-driven teams with clear ownership
- Strategic long-term partnerships
- Merit-based continuous innovation



Flexible Engagement Solutions

- Flexible resource allocation
- Clearly defined deliverables with predictable costs
- Complete project development and smooth transition
- End-to-end project oversight and delivery

PRODUCT ENGINEERING

We deliver end-to-end engineering solutions, transforming concepts into market-ready products with focus on quality and efficiency.

Key Offerings

- End-to-End Concept-to-Launch Development
- Advanced 3D Modeling and Analysis
- Comprehensive Testing and Production Drawings
- Design Optimization for Performance & Cost
- System Integration
- Product Support for Maintenance & Updates
- Engineering Change Management (ECN/ECR)

Business Impact

- | | | | |
|---|--|---|--|
| 1 | End-to-end development from concept to market-ready products | 3 | Engineering change management for continuous improvement |
| 2 | Quality assurance through comprehensive testing and validation | 4 | System integration expertise across multiple industries |

Industry Applications

Automotive & Transportation, Heavy Machinery, Industrial Equipment, Energy & Utilities, Medical Devices.

DIGITAL PLATFORM DEVELOPMENT

We implement innovative digital platforms using advanced technologies that boost efficiency and provide actionable insights.

Key Offerings

- Custom Software Development
- AI/ML Solutions for Smart Automation
- IoT Integration
- Digital Twin Development
- Data Analytics & Visualization

Value Creation

- | | | | |
|---|--|---|---|
| 1 | Custom software solutions for specific business challenges | 3 | Enhanced operational insights through data analytics |
| 2 | Smart automation through AI/ML implementation | 4 | IoT integration for improved connectivity and control |

Industry Applications

Manufacturing & Automation, Process Industries, Energy & Utilities, Transportation & Logistics, Smart Infrastructure.

VALUE ANALYSIS & VALUE ENGINEERING (VAVE)

Our VAVE services optimize product value by reducing costs and enhancing functionality through efficient design for manufacturers and end-users.

Client Advantages

- 1 | Strategic cost reduction while maintaining quality
- 2 | Weight optimization for improved efficiency
- 3 | Assembly process optimization
- 4 | Enhanced competitive positioning through benchmarking

Industry Applications

Automotive Components, Industrial Machinery, Consumer Products, Energy Systems, Transportation Equipment.

DIGITAL MANUFACTURING

We drive manufacturing innovation through Industry 4.0 and digital technologies to optimize production, quality, and reliability.

Industry Benefits

- 1 | Process optimisation for improved productivity
- 2 | Quality improvement through Lean/Six Sigma
- 3 | Bottleneck identification and resolution
- 4 | Smart manufacturing implementation

Industry Applications

Discrete Manufacturing, Process Industries, Automotive Production, Industrial Systems, Consumer Products

Key Offerings

- Strategic Cost Reduction
- Weight Optimization Programs
- Competitive Benchmarking
- Process Efficiency through Assembly Optimization
- Material Evaluation for Cost and Efficiency
- Supply Chain Optimization

Key Offerings

- Process Optimization for Enhanced Productivity
- Lean/Six Sigma Implementation for Quality
- Bottleneck Identification & Resolution
- Smart Manufacturing Solutions
- Smart Factory Implementation for Connected Operations

END TO END EMBEDDED SYSTEMS ENGINEERING

We deliver comprehensive embedded software solutions from concept to deployment, executing systems design and development projects for both new products and existing systems.

Key Offerings

- Feasibility Studies and Software Architecture
- Embedded Systems Design and Modeling
- Feature-driven Development
- Re-development and Reengineering Services
- Multiple Platform Porting
- Lifecycle Enhancements and Support
- Defect Tracking and Fixing
- Test Automation and Compliance Testing

Business Impact

- 1 Comprehensive development of new and existing products
- 2 Efficient system adaptation and platform porting
- 3 Comprehensive support through product lifecycle
- 4 Quality assurance through systematic testing and verification

Industry Applications

Automotive Electronics, Industrial Control Systems, IoT Devices, Medical Equipment Specialized Services



DISCIPLINE ENGINEERING

We deliver specialized engineering solutions for oil & gas and chemical sectors, ensuring safety, compliance, and reliability.

Industry Benefits

- 1 | Comprehensive coverage of Oil & Gas and Chemical industry requirements
- 2 | Integrated civil, electrical, structural, and mechanical engineering

Key Capabilities

- Multi-disciplinary Engineering: Integrated solutions for complex projects
- Technical Analysis: In-depth evaluations for precision engineering
- Regulatory Compliance: Adherence to stringent industry standards
- Safety Optimization: Risk management and mitigation strategies

- 3 | Enhanced safety through expert design
- 4 | Regulatory compliance assurance

Industry Applications

Oil & Gas Processing, Chemical Manufacturing, Petrochemical Plants, Refineries

DIGITAL FOUNDATION & ASSET INFORMATION MANAGEMENT

We provide digital solutions for asset lifecycle management, combining data insights to optimise performance and maintenance.

Key Capabilities

- Asset Register Development: Systematic data organization for easy access
- Data Warehouse Implementation: Centralized, efficient data management
- Asset Verification: Ensuring accuracy and reliability of asset records
- Data Cleaning: Standardizing data quality for effective decision-making

Operational Improvements

- 1 | Centralised asset information management
- 2 | Enhanced data accuracy through verification
- 3 | Improved decision-making through organised data
- 4 | Streamlined asset maintenance

Industry Applications

Manufacturing Facilities, Process Plants, Utility Operations, Infrastructure Projects

DIGITAL TWIN SOLUTIONS

We develop digital twins—virtual models of physical assets—for real-time monitoring, predictive insights, and optimized performance.

Key Capabilities

- Asset Modeling & Simulation: Virtual replication for enhanced oversight
- Real-Time Monitoring: Continuous tracking for quick interventions
- Performance Optimization: Real-time improvements for efficiency
- Predictive Maintenance: Proactive strategies to minimize downtime

Operational Excellence

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|---|---|
| 1 Real-time asset monitoring capabilities | 3 Predictive insights for maintenance |
| 2 Performance optimization through simulation | 4 Enhanced operational visibility |

Industry Applications

Manufacturing Operations, Process Industries, Energy Generation, Transportation Systems

AFTERMARKET SUPPORT

We optimize asset performance through post-deployment support, including proactive maintenance, efficient parts management, and expert training.

Key Capabilities

- Proactive Maintenance: Scheduled preventive care for reliability
- Spare Parts Management: Optimized inventory for rapid availability
- Technical Documentation: Detailed guides for ongoing support
- Training & Support: Skill-building for self-sustaining operations
- Performance Monitoring: Continuous tracking for peak performance

Long-term Value

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|--------------------------------------|---|
| 1 Improved maintenance efficiency | 3 Comprehensive technical documentation |
| 2 Optimized spare parts management | 4 Extended asset lifecycle |

Industry Applications

Industrial Equipment, Manufacturing Systems, Process Plants, Energy Systems

SUPPLY CHAIN MANAGEMENT

We optimize supply chains through strategic supplier development, cost reduction, and risk management to improve operational efficiency.

Key Capabilities

- Supplier Development: Building reliable, high-performing partners
- Cost Analysis: Strategic evaluation for optimized expenses
- Alternative Sourcing: Mitigating risk with flexible sourcing
- Risk Management: Anticipating and addressing supply chain risks
- Supply Chain Optimization: Enhancing Efficiency and Productivity

Strategic Benefits

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|---|--|---|--|
| 1 | Enhanced supplier development and management | 3 | Risk mitigation through alternate sourcing |
| 2 | Strategic cost analysis and optimization | 4 | Improved supply chain resilience |

Industry Applications

Manufacturing Industries, Process Industries, Automotive Sector, Industrial Equipment



Key Members & Contributor

LEADERSHIP TEAM

Our leadership combines years of expertise with revolutionary thinking to deliver tomorrow's engineering solutions today.



Ms. Pooja Sharma

Director & Vision Leader

25+ years in engineering innovation, leading Cognitive IES's flat organisational model

Pioneered co-patent development framework and self-driven team culture

Expert in mobility and industrial sectors with a focus on next-gen solutions



Mr. Rajesh Shah

Global Operations Architect

30+ years in global engineering operations and Oil & Gas solutions

Led US-India operations with flexible delivery models

Pioneered digital twin implementation for process optimisation



Mr. Parth Rana

Value Engineering Strategist

11+ years achieving 15-30% cost optimisation in engineering projects

Expert in automotive and heavy machinery value engineering

Leads global material optimisation initiatives



Mr. Shivanshu Prajapati

Process Innovation Leader

Expert in Smart P&ID and plant validation

Led petrochemical digital transformation, reducing timelines by 30%

Specialist in IoT-based predictive modelling



Ms. Vijeta Yadav

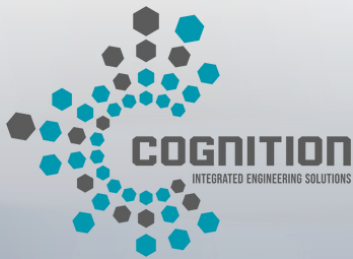
HR & Admin Leader

210+ years in HR and administration

Drives recruitment, policy compliance, and performance management

Builds and maintains organizational culture





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Location

Vadodara, India
(Engineering Center)

Chicago, USA
(Business Development Office)