

Indian Companies Using Operations Research

Tata Steel

Applications: Production planning, supply chain optimization, raw material blending, logistics.

OR Techniques: Linear programming, network flow optimization, simulation.

Larsen & Toubro (L&T)

Applications: Project scheduling, resource leveling, construction logistics.

OR Techniques: CPM, PERT, optimization algorithms.

Indian Railways (via CRIS)

Applications: Crew scheduling, route planning, coach optimization, passenger load balancing.

OR Techniques: Integer programming, graph theory, simulation modeling.

Flipkart & Amazon India

Applications: Last-mile delivery optimization, inventory management, warehouse operations.

OR Techniques: Vehicle Routing Problems (VRP), queuing theory, predictive analytics.

Indian Oil Corporation (IOCL)

Applications: Fuel logistics, refinery scheduling, distribution network design.

OR Techniques: Linear programming, transportation problem, simulation.

Tata Consultancy Services (TCS)

Applications: IT services optimization, staffing, business process reengineering.

OR Techniques: Mathematical modeling, queueing, simulation.

ICICI Bank / HDFC Bank

Applications: ATM replenishment, credit scoring, branch location optimization.

OR Techniques: Forecasting models, optimization algorithms, stochastic modeling.

ONGC (Oil & Natural Gas Corp.)

Applications: Drilling optimization, resource allocation, pipeline layout planning.

OR Techniques: Optimization models, GIS-based decision support systems.

ISRO (Indian Space Research Organisation)

Applications: Satellite scheduling, launch planning, resource allocation for ground stations.

OR Techniques: Combinatorial optimization, linear programming, simulation.

National Highways Authority of India (NHAI)

Applications: Highway toll optimization, traffic flow modeling, BOT project feasibility.

OR Techniques: Traffic simulation, optimization models.

DRDO (Defence Research and Development Organisation)

Applications: Weapon systems deployment, logistics, mission planning.

OR Techniques: Game theory, simulation, queuing models.

C-DAC (Centre for Development of Advanced Computing)

Applications: Simulations in logistics, disaster management, and smart cities.

OR Techniques: High-performance computing, optimization and simulation models.