



CLEAR VIEW

Stiff global competition, coupled with eco-friendly requirements, calls for shorter time-to-market. Although there are greater uncertainties for manufacturers, their responses need to be quick and accurate, yet appropriate and eco-friendly.

POM focuses on operations research and system analysis technologies for effective management of manufacturing and supply chain operations' to achieve better productivity and eco-efficiency. The technologies enable companies to collaboratively manage business activities and seamlessly integrate their manufacturing operations with their partners in the supply chain. These operations research technologies leverage the Internet and other communication tools to create solutions that specifically meet the needs of today's complex and dynamic business environment.

The group carries out collaborative research with academic institutions and provides technology transfer and training to the manufacturing industry.

Core Competencies

Manufacturing System Analyses (MSA)

- Engineering, Procurement and Construction (EPC) global-enabled RFID track and trace
- Manufacturing systems modelling and simulation for manufacturing operations improvement, plant layout optimisation and production flow design
- Data analytics in manufacturing and supply chains
- Eco-friendly vehicle routing for urban last mile logistics

Manufacturing Operations Management (MOM)

- Business Model Innovation
- Operations Management Innovation (OMNI) productivity leaders and process improvement methodology, and tools & techniques
- LEAN best practices and tools
- Predictive Inventory Planning and Optimisation
- Intelligent Forecasting
- Production planning and scheduling for High-Mix-Low-Volume (HMLV) manufacturing
- Manpower planning and scheduling for manufacturing-related service industry

Sustainability and Life Cycle Management (SLM)

- Life Cycle Assessment (LCA) and Life Cycle Costing (LCC) of products, services and systems
- Energy efficiency audit, benchmarking and reporting
- Waste audit, benchmarking and reporting
- Waste-to-resource matching for closing materials loop and enabling industrial symbiosis

Technologies Available for Transfer

- Engineering, Procurement and Construction (EPC) global-enabled RFID track and trace platform
- Multi-criteria decision-making evaluation and decision toolkit
- Demand and inventory planning (company and supply chain level)
- Operations Management Innovation Methodology™ (OmniMethodology™)
- Production planning and scheduling for HMLV manufacturing
- Carbon Footprint Assessment and Analysis Toolkit

Target Industries

- Aerospace • Construction
- Distribution and Supply Chain Services
- Marine • Oil & Gas • Precision Engineering

Major Facilities

- Simulation software
- Optimisation and analysis software
- Business support software
- Software development tools
- Software testing tools
- Life-cycle assessment tools

Industry Partners

- 2M Precision Automation
- A & One Precision Engineering
- Abbott Manufacturing Singapore
- Accesstech
- Acez Instruments
- Acot Precision
- Adventus Singapore
- Aero Laundry & Linen Services
- Akribis Systems
- Amalgamated Manufacturing
- Antuit Group Pte Ltd
- AQUEEN Hotels
- ARQiMATie
- ASP Marine
- Astro Express Logistics
- Axxel Marketing
- Baylink Logistics
- Beautec
- Biomax
- Blu Dot Asia
- Coherent Singapore
- CPT Engineering
- Craftmark Singapore
- Emerson Process Management
- Enercon Systems International
- ETH Enterprise
- GLOBALFOUNDRIES
- Goodrich Global
- Grocery Logistics of Singapore
- Howco Metals Management
- HPH Technologies
- Huationg Asia
- ISOLAB
- Jamco Singapore
- JBB Groupage
- Jurong Shipyard

- Kian Ann Engineering
- Kim Sin Medicine Manufactory
- Keppel Shipyard
- LSH Electrical Engineering
- Modern Pak
- Neo Group
- Neutral Technologies
- NTS Group Asia
- Pacific Climate
- Pallets Asia
- Panasonic Factory Solutions Asia Pacific
- Piaget Chemicals
- Pirtek Asia
- Prima Food
- Profoto Service
- Proline
- Richland Logistics
- Ricoh
- Rutledge E&P
- Sakura Tech
- Sauter Singapore
- Seng Heng Engineering
- Serrano Holdings
- Shingda Construction
- Smartec
- Smooth Ways Auto Center
- Soverus Technology
- Sunny Metal & Engineering
- Sunscreen Singapore
- Super Bean International
- Swee Heng Bakery
- Tat Hong Plant Leasing
- Tat Lee Engineering
- Toshiba TEC Singapore
- Tranzplus
- Tunity Technologies
- United Graphic
- United Test & Assembly Centre
- Uwin Mobile
- Wah Joo Seng International
- Wavelength Opto-Electronics
- Y3 Technologies
- Yeo Trailer International

Research Partners

- Bioinformatics Institute (Singapore)
- Institute for Infocomm Research (Singapore)
- Institute of Chemical & Engineering Sciences (Singapore)
- Institute of High Performance Computing (Singapore)
- Korea Advanced Institute of Science and Technology (Korea)
- Linköping University (Sweden)
- Nanyang Technological University (Singapore)
- National University of Singapore (Singapore)
- Pennsylvania State University (USA)
- Rochester Institute of Technology (USA)
- Sabanchi University (Turkey)
- Singapore Management University (Singapore)
- Swiss Federal Institute of Technology Zurich, ETH Zurich (Switzerland)
- Technische Universität Braunschweig (Germany)
- The Logistics Institute Asia Pacific (Singapore)

