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SYMBIOSIS INSTITUTE OF OPERATIONS MANAGEMENT, NASHIK

SCOPEX'25

CHAMPIONSHIP

Celebrating Supply Chain & Operations Excellence

ROUND 01		ROUND 02	
DATE	MODE	DATE	MODE
OCTOBER 04	ONLINE	DECEMBER 12	OFFLINE SIOM NASHIK

SYMBIOSIS INSTITUTE OF OPERATIONS MANAGEMENT

Presents

SCOPEX'25

CHAMPIONSHIP

Celebrating Supply Chain & Operations Excellence

e-patrika

12th December 2025

SCOPEX'25
CHAMPIONSHIP

"Excellence is never an accident. It is the result of high intention, sincere effort, and intelligent execution."

– Aristotle

"Great things are done by a series of small things brought together — just like a supply chain in perfect rhythm."

– Vincent Van Gogh

"Quality means doing it right when no one is looking. That's where true operational excellence begins."

– Henry Ford

"Perfection is not attainable, but if we chase perfection, we can catch excellence."

– Vince Lombardi

"The line between disorder and order lies in logistics."

– Sun Tzu

About SIOM

Symbiosis Institute of Operations Management (SIOM), established in 2005 as an integral part of Symbiosis International (Deemed University), stands as a beacon of excellence in the realm of Operations Management. Since 2005, SIOM has been redefining this field, offering a specialized curriculum aligned with industry needs. The institution goes beyond traditional education by providing real- time business solutions through robust collaborations between academia and industry, cementing its status as a centre for Business Excellence.

Situated in Nashik, SIOM is renowned for its academic prowess, fostering a dynamic learning environment. The institute, guided by the vision of "Promoting international understanding through quality education," transforms engineers into adept business techno-experts, ready to navigate competitive markets. Emphasizing value-based education, SIOM nurtures innovative, agile, and dynamic business leaders, instilling strong values. The curriculum, tailored to industrial demands, ensures students not only grasp theoretical concepts but also engage in live business ventures and pursue industry-driven certifications.

With a commitment to shaping future leaders, SIOM, with its industry- focused programs, experienced faculty, and vibrant campus life, prepares students to excel in the ever-evolving landscape of Operations Management. The strategic location in Nashik, an industrial hub, further enhances the practical exposure students receive, making them convergent thinkers and future-ready business leaders.

SCOPEX' 25

SCOPEX is an annual flagship event hosted by Symbiosis Institute of Operations Management (SIOM), Nashik, serving as a dynamic platform that celebrates and showcases the pinnacle of Supply Chain Innovation, Operations Excellence, and Business Management.

As SIOM embarks on its 4th edition of this distinguished event, SCOPEX stands as a testament to the convergence of cutting-edge techniques and revolutionary strategies that continue to redefine the operational landscape across industries. The event brings together industry leaders, experts, professionals, and practitioners from diverse sectors, providing them with a unique opportunity to demonstrate groundbreaking methodologies and ideas that propel operational success.

This multifaceted event is designed to cater to a wide spectrum of industries. It encompasses four distinct categories, catering to businesses of varying scales: Large-Scale Industry Category, Small & Medium Enterprise (SME) Category, Agri-business Organization Category, and the Startup Category. By embracing this diverse array of sectors, SCOPEX becomes a unified platform where organizations irrespective of size, maturity, or domain can showcase their operational excellence, share domain knowledge, and learn from each other's experiences.

Participants are encouraged to present their innovative approaches, transformative strategies, and best practices that have driven significant advancements in their operational domains. SCOPEX continues to serve as a collaborative platform for sharing success stories, exchanging insights, and fostering meaningful engagement among industry leaders, academicians, and emerging talents in the field of operations management.

Director's Message

Dr. Vandana Sonwaney

Director, Symbiosis Institute of Operations Management, Nashik

At Symbiosis Institute of Operations Management (SIOM), every milestone reflects our unwavering commitment to shaping the future of Supply chain and Operations Management. Since 2005, SIOM has stood as a pioneer, blending academic excellence with industry relevance, creating leaders who are not just thinkers but doers.

SCOPEX is a shining testament to this vision. From its roots as OPEX to its evolution as SCOPEX, this event has become more than a competition—it is a celebration of innovation, collaboration, and transformation. It embodies.

SIOM's philosophy of bridging academia with industry, providing a platform where bright minds come together to redefine possibilities in operations and beyond.

As we embrace the legacy of SCOPEX, I extend my gratitude to our industry partners and the brilliant minds of our participants, who have been instrumental in shaping this journey into something pioneering. Let us continue to push boundaries, innovate with purpose, and uphold the spirit of excellence that defines SIOM. I invite you all to join us in future editions of SCOPEX as we strive to create new milestones together.

Faculty Message

Dr. Sandeep Sharda
Faculty Convener, SIOM Nashik

At SIOM, SCOPEX'25 showcases the institute's commitment to nurturing talent and fostering innovation to solve real-world operations management challenges. Evolving from OPEX in 2023, it has grown into a strong academia-industry platform that promotes collaboration, PBL-driven IoT and technology projects, and impactful, industry-aligned operational solutions. The dedication of students, jury, faculty, and the organizing committee has made this edition a success and sets the stage for future milestones in operations excellence. With an ever-expanding vision, SCOPEX continues to empower young minds to think strategically, innovate responsibly, and lead with operational rigor.

Dr. Madan Jagtap
Faculty Co-Convener, SIOM Nashik

SCOPEX, the flagship initiative of SIOM, continues to explore and showcase the latest improvements in organizations, with a strong focus on throughput and operational excellence. This year, we have invited start-ups to present their technological capabilities and digital transformation solutions. The overwhelming response from start-ups across diverse segments shows how SCOPEX is steadily rising towards a new benchmark. SCOPEX 2025 will strengthen our students' morale and knowledge base, aligning them with an industry-focused approach and encouraging real-time problem-solving..

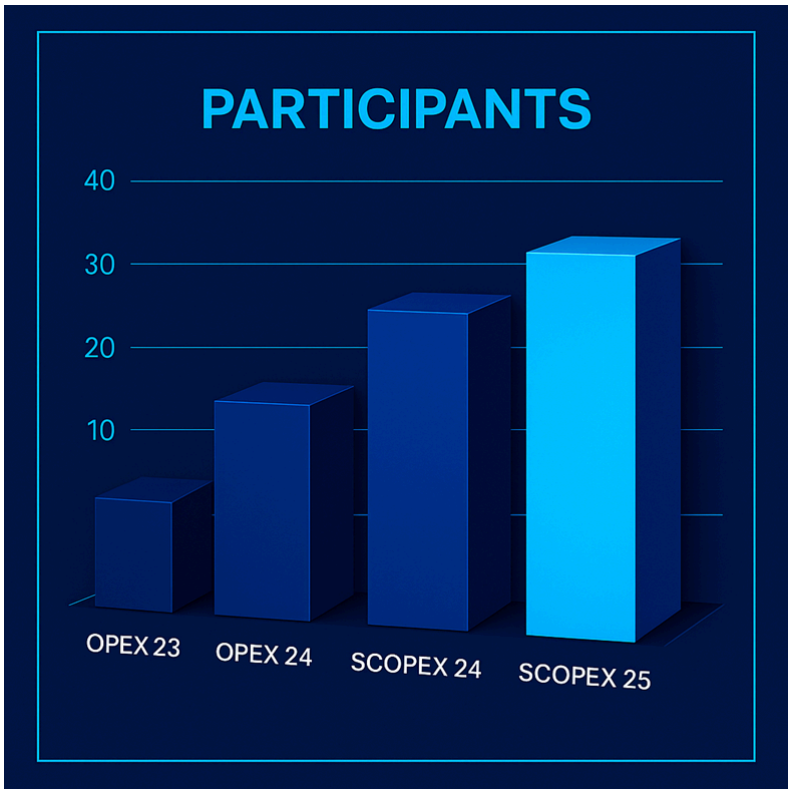
Dr. Rahul Wadghane
Faculty Co-Convener, SIOM Nashik

SCOPEX is not just an event but a Business-to-Business interaction to learn best business practices in operations at SIOM, Nashik.
SCOPEX is growing to another level every year. I feel in SCOPEX business professionals compete with each other by showcasing their best business practices.
This is a powerful convergence of business, academia, and experts! Join us for this once-a-year opportunity.

Evolution of SCOPEX

SCOPEX is the annual flagship event of the Symbiosis Institute of Operations Management (SIOM), Nashik, envisioned as a premier platform that celebrates excellence in Supply Chain Innovation, Operations Excellence, and Business Management. Now in its 4th edition, SCOPEX has firmly established itself as a benchmark for showcasing cutting-edge practices and transformative strategies that are redefining the operational landscape across industries. The event brings together eminent industry leaders, domain experts, and practitioners from diverse sectors, offering a high-impact forum to present pioneering methodologies that drive sustainable operational success.

Structured as a comprehensive, multi-sectoral platform, SCOPEX features four distinct categories, including the Large-Scale Category, SME & Start-up Category, and the Agri-business Organization Category, thereby catering to organizations across varied scales and industry verticals. By bringing together such a diverse industry ecosystem, SCOPEX enables participants to exhibit operational excellence, exchange best practices, and gain insights from shared experiences. Over the years, it has evolved beyond a competition into a powerful catalyst for industry-academia collaboration and progressive thought leadership, inspiring the SIOM student community to engage with real-world challenges and reinforcing SIOM's commitment to nurturing future-ready leaders in operations and supply chain management.



SCOPEX'25
CHAMPIONSHIP

Organizing Team


SNEHANSHU SOMKUWAR


VARSHINI R.


NIKHIL MALALIKAR


VAIBHAV SHARMA


ABHIJEET DHANAWADE


KARTIK SABHARWAL


JAYESH PATIL


UTKARSH WAGHAMBARE


MOHIT KANJARIYA


ABHIRAM PANDE


SAMAR SADIQUE


HRITIK GHORPADE


SAURABH PAGAR


MOHIT RAUT


ANIKET ZAMBARE


ABHISHEK VADRALE


PRANAY PATIL


MITHILESH BHUTADA

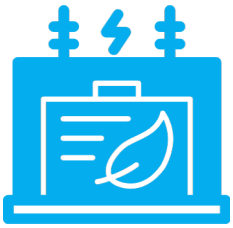

PRIYANCY GAUTAM


SNIGDHA CHAKRABORTY


VARUN AWASTHI

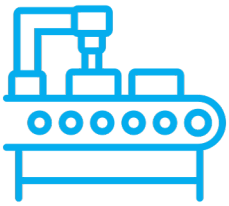

VITTHAL POL

Themes



• Sustainable Transformation

- Operational Sustainability
- Circularity Initiatives Reducibility
- Recyclability, and Reusability of Resources
- Energy Conservation



• Manufacturing and Operations Excellence

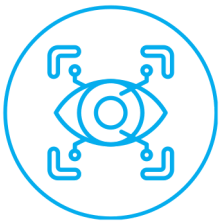
- Lean and Six Sigma Manufacturing
- Theory of Constraints
- Resilience and reliability
- Continuous Improvement

• Demand & Supply Planning

- Collaborative Planning, Forecasting and Replenishment(CPFR)
- Advanced Demand Forecasting
- Engaged Stable Workforce
- Vendor Sourcing and Procurement

• Supply Chain Excellence

- Production and Inventory Management
- Supply Chain Resilience & Risk Mitigation
- Logistics and Distribution
- Supply Chain Analytics



• Cyber-Physical Systems IoT, and Automation

- Modelling and Simulation
- Industrial Automation and Robotics
- Cybersecurity in Industrial Systems
- Data Handling Optimization

Final Round Jury Profile

Mr. Deepak Kadhane

Associate Director - Procurement, Emerson India

Mr. Deepak Kadhane, Associate Director - Procurement at Emerson India, carries 20+ years of experience and is recognized for his techno-commercial excellence, vendor development strength, and contributions to digital procurement and DE&I initiatives.

Mr. Deepak Kadhane, Associate Director at Emerson Process Management India, has 20+ years of procurement and EPC experience with notable expertise in techno-commercial leadership and digital procurement initiatives.

Mr. Devrajan Iyengar

Procurement Team Lead - Asia, BASF Coatings

Mr. Devarajan Iyengar, Procurement Team Lead - Asia at BASF Coatings, brings extensive global procurement experience and is recognized for his servant leadership, team development, and transformation work across APAC. He is also a certified Clifton Strengths Coach and Coach U Facilitator.

Mr. Devarajan Iyengar, Procurement Team Lead - Asia at BASF Coatings, is a transformational procurement leader and certified Clifton Strengths Coach with global experience across BASF and Bayer.

Mr. Manish Tiwari

Head - Configuration Center, NASA EMEA & APAC

Mr. Manish Tiwari is a seasoned engineering and operations leader with over 20 years of experience across the material handling, construction, and mining equipment industries. His career reflects strong technical expertise, operational leadership, and a consistent focus on performance excellence.

Mr. Manish Tiwari is responsible for design optimization, project execution, and cross-regional operational performance, contributing significantly to global engineering and operational alignment.

Online Jury Profile

Mr. Ankur Gandotra

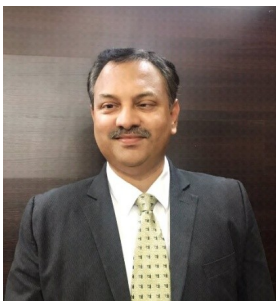
Head, Industry - Academia Partnerships, IFQM

Mr. Ankur Gandotra is an innovative strategist and industry leader, known for advancing operational excellence and modernizing supply chain ecosystems. With deep expertise in process optimization, he has empowered businesses to scale efficiently, strengthen market presence, and adopt technology-driven solutions that enable sustainable and resilient growth.

Mr. Sayaji Jadhav

DGM, Manufacturing Engg. at Mahindra & Mahindra

Mr. Sayaji Jadhav is a dynamic leader and transformation expert, celebrated for his work in building agile agribusiness and logistics frameworks. His strong command over end-to-end operations has helped enterprises enhance productivity, nurture farmer-centric value chains, and integrate sustainable practices that drive long-term impact.



Dr. Samir Yerpude

Head, Portfolio Management, Tata Motors

Dr. Samir Yerpude is a distinguished academic and thought leader, recognized for shaping future-ready professionals in the fields of agribusiness and management. With a commitment to research-driven insights, he has made extensive contributions to policy, rural development, and entrepreneurial ecosystems, inspiring innovation and informed decision-making across various sectors.

Ms. Varsha Vikhe

Sr. Manager, ABB

Ms. Varsha Vikhe is a passionate development professional and sustainability advocate, known for empowering rural communities and strengthening agricultural value chains. Through her work in capacity building and community-led initiatives, she has championed inclusive growth, environmental stewardship, and impactful social transformation.

Online Jury Profile

Mr. Sushil Vaishnav

Co Founder, ECOIL

Mr. Sushil Vaishnav is a seasoned supply chain expert and operational strategist, renowned for enhancing efficiency and building scalable logistics solutions. His leadership in integrating technology, enhancing service quality, and driving performance excellence has enabled organizations to achieve greater competitiveness and sustainable growth.

Dr. Rakesh Kumar Gautam

Faculty Marketing Management, LPU

Mr. Rakesh Gautam is a forward-thinking leader and domain expert, respected for his contributions to agribusiness, operations, and market linkages. With a proven ability to align strategy with grassroots realities, he has strengthened stakeholder networks, fostered innovation, and enabled value-driven growth across the agricultural landscape.

Mr. Sunil Kumar Dayama

Adjunct Professor, SJMSOM Bombay

Mr. Sunil Kumar Dayama is a seasoned engineering and manufacturing professional known for strengthening operational efficiency and quality excellence. With rich experience in automotive and industrial systems, he has led impactful improvements in productivity, process reliability, and team capability, embodying disciplined leadership and continuous improvement.

Dr. Rahul Dubey

Technologist and Senior IEEE Member

Dr. Rahul Dubey is a distinguished technologist and Senior IEEE Member, celebrated for his contributions to embedded systems, FPGA design, IoT, and Edge AI. With impactful roles at IIT Roorkee, DA-IICT, Tesla, and Doulos Inc., he has advanced research, innovation, and high-quality technical education, shaping future-ready engineering talent.

Event Overview:

Registration Process and Evaluation Criteria

As we approach the culmination of this exciting competition, we reflect on the journey that began with the registration of talented teams. The event was designed to highlight innovative business solutions that have led to tangible, measurable outcomes. Let's take a look at the process that brought us here and the evaluation criteria that guided the participants.

1. Registration Process:

The registration process for this competition was open to all teams with proven business initiatives that demonstrated sustained or improved performance over a minimum of six months. Multiple teams of 2-3 members each from the same company were allowed to register, giving organizations an opportunity to showcase various solutions and innovations.

Registration for SCOPEX is structured under the following four distinct categories:

1. Large Scale Industries
2. Small Scale Industries
3. Start - Up Industries
4. Agri - Business Industries

How to Register: Teams completed the registration form available on the event website, detailing their initiative, key outcomes, and performance indicators. The deadline for registration was 27th September 2025.

Team Requirements: Each team consisted of 2-3 members, and all participants were required to submit a brief summary of their initiative along with the registration.

Event Overview:

2. Round 1: Online Presentation

Held on 4th October 2025, Round 1 saw teams present their initiatives via an online platform. Each presentation was allotted 15 minutes, followed by a 5-minute Q&A session, where the jury could pose questions to better understand the initiatives and their outcomes.

Key Highlights from Round 1 :

- Teams shared their problem-solving approaches, innovative solutions, and the results achieved.
- The presentations showcased the effective use of management techniques, value addition, and cost-saving strategies.
- After the presentation, teams engaged in a Q&A with the jury, addressing any queries related to their initiative's impact and sustainability.

3. Final Round: Live Evaluation Round at SIOM Nashik !

On 12th December 2025, the final round brought the shortlisted teams to SIOM, Nashik, where they presented their initiatives in person to the esteemed jury panel. Each team was given 15 minutes for their presentation, followed by a 5-minute Q&A session.

What was Expected in the Final Round :

Teams presented in greater detail, covering their initiative's results, scalability, and potential for long-term sustainability.
The presentations were expected to reflect not only the success of the initiative but also its ability to scale and make a lasting impact in the industry.

Event Overview:

Common Evaluation Criteria:

The evaluation of both rounds was based on the following common criteria

Key Highlights from Round 1 :

Innovativeness & Use of Technology: The originality and creativity of the solution proposed by the team.

Problem-Solution Fit: How well the solution addressed the identified problem or challenge.

Management Techniques: The effectiveness of management practices used to implement the solution.

Value Addition/Cost Saving: The ability of the solution to add value or save costs for the business or industry.

Content & Delivery: The clarity, structure, and engagement level of the presentation.

Scalability & Sustainability: The potential of the solution to be scaled up and its long-term viability.

Generalization: Evaluate whether the solution can be applied to broader contacts, users, industries or scenarios.

Q&A Performance: The ability of the team to respond confidently and effectively to questions from the jury.

LSC
Large Scale Category

Meet Our Contenders of Final Round!

Bosch Mobility

Bosch Mobility is a global leader in advanced automotive and transportation technologies, offering solutions in electrification, vehicle electronics, sensors, software, and connected mobility. The company develops systems for a wide range of vehicles, focusing on making mobility safer, more efficient, and sustainable.

Mahindra & Mahindra

Mahindra & Mahindra's Nashik facility is a hub for producing utility vehicles, SUVs, and commercial models like the Scorpio and XUV700. With advanced manufacturing, sustainability initiatives, and quality focus, it supports domestic and export markets, reinforcing Mahindra's leadership in the automotive sector.

Godrej & Boyce

The Godrej Enterprises Group—including Godrej & Boyce and its affiliates—has been driven by an entrepreneurial spirit. The Commercial Division partners with G&B businesses with a primary focus on Outbound Logistics, Warehousing, Customer Support, Administration, and Infrastructure.

TDK India Private Limited

TDK India, is a subsidiary of TDK Electronics, develops and markets electronic components for automotive, industrial, and consumer electronics. With a focus on cutting-edge technology, the company serves diverse industries, including information and communications technology, contributing to global technological advancements

LSC
Large Scale Category

Meet Our Contenders of Final Round!

Rehlko Power

Kohler Power Systems is a global leader in power-generation solutions, offering a wide range of diesel and gas generators for residential, commercial, and heavy-duty applications. Their generators are known for reliability, durability, and performance under demanding conditions, with applications spanning homes, data centres, hospitals, and large industrial facilities.

KSB Pumps

KSB Pumps is a German multinational specializing in pumps and valves, with six manufacturing units in India. Renowned for its strong sales, marketing, and service network, KSB offers comprehensive solutions to customers worldwide. Its operations spans continents, except Antarctica ensuring global reach and impact.

ABB India

ABB (Indian Subcontinent) is a global leader in electrification and automation, helping industries and infrastructure become more efficient, productive and sustainable. With over 140 years of history and a workforce of more than 105,000 worldwide, ABB leverages its engineering and digitalization expertise to power sectors including utilities, industry, transport and infrastructure across India and neighbouring regions.

SME

Small & Medium Scale Category

Meet Our Contenders of Final Round!

Mahamaya Polymers

Mahamaya Polymers manufactures high-quality PVC film sheets, offering decorative, sequins (sitara), and food-grade variants. Using materials like DOP, epoxy, tin stabilizer, and titanium dioxide, the company produces durable and versatile sheets in various sizes, colors, and thicknesses catering to a wide variety of industrial and commercial applications.

Abhijeet Technoplast

Abhijeet Techno - Plast is a prominent manufacturer in the plastic plastic products, including packaging materials, household items, and industrial components, the company has built a strong reputation as a reliable supplier to sectors like food processing, pharmaceuticals, and consumer goods.

Nivid Informatics

Nivid Informatics Pvt. Ltd. is the India partner for Haskoning UK and supports industries through advanced Modeling, Simulation, and Optimization solutions. The company promotes and implements the WITNESS simulation software, helping businesses model and optimize processes focused on throughput, cost, time, and resource utilization.

Freudenberg Gala

Freudenberg Gala Household Products Pvt. Ltd. is a leading manufacturer of home-cleaning tools in India, offering durable and user-friendly products like mops, brooms, and brushes. Backed by strong global expertise and expanding production capabilities, the company continues to grow its presence in domestic and international markets.

Rishabh Instruments

Rishabh Instruments Limited founded in 1982 is a global leader in energy-efficiency and electrical instrumentation solutions. The company designs, develops and manufactures a wide range of precision products including analog panel meters, low-voltage current transformers, metering, automation, and industrial measurement instruments.

STP

Start Up Category

Meet Our Contenders of Final Round!

Trulot Technologies

TruLot founded in 2022 is a technology-driven logistics startup that provides a smart software-as-a-service platform to optimise long-haul truck fleet operations. Its solutions enable fleet operators to increase truck utilization by up to 25%, reduce downtime, improve driver engagement and safety, and even track emissions in real time.

Senselive Technologies

SenseLive founded in 2019 and based in Nagpur provides industrial-grade IoT and automation solutions to help companies digitize operations, improve energy and resource management, and enable predictive maintenance. Their offerings include gateways, sensors, energy-management platforms, and water/production monitoring systems enabling real-time visibility, data-driven analytics, and better operational efficiency for manufacturing, energy, and infrastructure sectors.

Yagna Entreprenuers

Yagna World is a business consulting firm that helps organizations improve performance using TOC, Lean, and DDMRP principles. They focus on identifying bottlenecks, streamlining operations, and enhancing project and inventory management to drive consistent, measurable business results.

AGRI

Agri Business Category

Meet Our Contenders of Final Round!

PR Linseed

PR Linseed creates linseed-based textile and food products by extracting fibre from flax plant waste and converting it into yarn and fabric. The company also offers edible linseed items, aiming to boost farmer and weaver income through mechanization and value addition.

Minds Solvit

Minds Solvit's biotechnology segment provides specialized consulting and technical support to help biotech companies develop, refine, and scale their products and processes. The segment focuses on delivering scientific expertise, process optimization, and strategic guidance to enable efficient growth and innovation within the biotechnology domain.

Adico Escorts

Adico Escorts Agri Equipments Pvt. Ltd. is a manufacturing company specializing in agricultural machinery and equipment. The company focuses on delivering reliable, efficient, and innovative solutions to support modern farming needs. With a strong emphasis on supply chain and operational excellence, Adico Escorts works to optimize inventory, improve production efficiency, and enhance customer service. By adopting lean practices, digital tracking, and continuous improvement initiatives, the company aims to reduce costs, improve quality, and strengthen its market presence in the agricultural equipment industry.

SCOPEX'25
CHAMPIONSHIP

Excellence Practices
LIVE INDUSTRY PROJECTS

PROJECT 1

Title: *Space Optimization in Thar Roxx – A Supply Chain Excellence Initiative at Mahindra & Mahindra*

Case Summary

At Mahindra & Mahindra, a space optimization initiative was launched in the Thar Body Shop to enhance operational efficiency, improve material flow, and create additional storage capacity. Rapid growth in production volumes had resulted in space constraints, material movement delays, and increased handling time. To address these challenges without impacting the ongoing production or ramp-up schedule, the team redesigned the layout using lean manufacturing principles, introduced structured storage enhancements, and digitized inventory visibility.

The initiative combined both technical and managerial interventions to ensure a sustainable improvement in space utilization and operational flow, ultimately strengthening the overall supply chain performance.

Problem Statement

How can Mahindra & Mahindra optimize space within the Thar Roxx Body Shop to improve material flow, reduce handling time, and enhance storage efficiency—while ensuring zero disruption to current production and upcoming ramp-up commitments?

Solution:

The project approach included a combination of technical redesign and managerial excellence to deliver a seamless transformation: Technical Actions:

Implemented lean layout principles to eliminate non-value-added movement.

Restructured storage areas and introduced vertical racking systems to maximize cubic space.

Applied spaghetti diagram analysis to streamline material flow and reduce operator movement.

Integrated digital inventory tracking for real-time visibility and faster retrieval.

Managerial Actions: Enabled cross-functional coordination across Production, Stores, Maintenance, and Logistics. Adopted a phased implementation plan supported by periodic performance reviews. Strengthened change management through targeted training, visual tools, and process standardization. These combined actions ensured a smooth transition to the optimized layout while maintaining uninterrupted production operations.

Key Results: Quantitative Gains

- 62% increase in available floor space
- 28% reduction in material handling time
- 15% improvement in inventory accuracy
- Faster throughput and reduced cycle time due to smoother flow
- Enhanced ergonomics and workplace safety
- Improved team morale through collaborative problem solving
- Stronger cross-functional synergy and process ownership

Impact: This initiative demonstrated how strategic space planning, lean thinking, and effective teamwork can significantly uplift operational efficiency. The space optimization project at Mahindra & Mahindra not only improved day-to-day shop-floor performance but also set a benchmark for supply chain excellence and continuous improvement across facilities.

PROJECT 2

Title: Operational Efficiency Enhancement on the 15KD Finishing Line at REHLKO

Case Summary

RHELKO has made substantial progress in setting up the 15KD Finishing Line, with most systems installed and operational. However, a detailed assessment revealed several improvement areas that are currently limiting workflow efficiency, material flow, and ergonomic effectiveness.

To achieve stable, high-performance operations, targeted interventions in layout design, workstation ergonomics, and sub-assembly integration are required. These corrective actions will help unlock the full potential of the finishing line and support long-term productivity.

Problem Statement

How can RHELKO optimize the 15KD Finishing Line by resolving layout constraints, improving workstation ergonomics, enhancing pick-to-light accessibility, and reducing space bottlenecks to achieve seamless production flow and operational efficiency?

Solution:

Key Improvement Areas & Recommended Actions

1. Workstation Issues on the Main Line Finishing: Suboptimal workstation configurations have resulted : Ergonomic challenges, Reduced operator efficiency, Increased fatigue

Recommendation: Redesign workstation layout to improve tool accessibility, operator reach zones, and ergonomic comfort to ensure faster task execution and reduced strain.

2. Layout Challenges in Scope Design: The existing scope layout does not fully reflect real operational needs, causing: Workflow disruptions, Material handling inefficiencies

Recommendation: Revise the layout by incorporating feedback from operators, line leaders, and process engineers to ensure alignment between design intent and actual shop-floor requirements.

3. Muffler Sub-Assembly Layout Constraints: The current sub-assembly setup is misaligned with main line flow, leading to: Integration delays, Increased manual handling

Recommendation: Reconfigure the muffler sub-assembly zone to ensure better synchronization with the finishing line and reduce unnecessary movement.

4. Pick-to-Light Rack Layout Issues: The pick-to-light system is affected by:

Poor reachability, Limited visibility, Slower picking speeds

Recommendation: Modify rack placement, height, and lighting angles to improve picking speed, accuracy, and operator comfort.

5. Space Constraints on the Finishing Line Conveyor: Limited conveyor-side space has resulted in:

Congestion, Restricted material flow, Reduced operational speed

Recommendation: Explore compact equipment options, optimize storage positioning, and adjust conveyor layout to eliminate bottlenecks and improve flow.

Impact : Implementing these improvements will enable RHELKO to:

- Achieve higher operational efficiency
- Improve ergonomics and safety
- Enhance synchronization between processes
- Reduce material handling delays
- Strengthen long-term productivity and stability of the 15KD Finishing Line

PROJECT 3

Title: Bosch's 8-80-1-0 Transformation: Overcoming Capacity Crunch to Boost Production Throughput

Case Summary

At Bosch, a major performance improvement initiative was launched to address a growing capacity crunch that had begun to impact production output and delivery commitments. The demand for increased throughput could not be met with existing manufacturing resources, prompting the need for a structured improvement strategy.

Problem Statement

How can Bosch overcome its production capacity limitations while improving OEE, reducing quality-related losses, eliminating customer complaints, and increasing throughput—without major capital investment or compromising delivery performance?

Solution:

The project utilized the 8-80-1-0 approach, integrating smart automation and lean investment principles to drive rapid transformation in production performance. Key actions included:

Smart Automation Integration - Automated critical operations using advanced control systems to eliminate operator-dependent quality variations, increase throughput, and ensure stable production.

Lean Investment Strategy - Avoided high-cost machine purchases by optimizing existing resources, focusing on low-cost, high-impact process enhancements.

Process Optimization & Flow Improvement - Streamlined workflows, minimized manual touchpoints, improved takt alignment, and controlled variation to enhance productivity and consistency.

Performance Governance Mechanism - Daily OEE monitoring, COPQ tracking, and defect-prevention checks ensured sustained improvement throughout the 8-week window.

These structured interventions enabled Bosch to remove bottlenecks, improve reliability, and strengthen quality standards.

Key Results: Within eight weeks of the start of production, the initiative delivered outstanding improvements:

- OEE increased from 69% to 82%
- Cost of Poor Quality reduced to 0.02%
- Customer complaints dropped to zero
- ₹11 Crore cost savings achieved by eliminating the need for a new machine investment
- 52% boost in overall productivity
- 29% increase in output, enabling the plant to meet expanded capacity requirements
- Return on investment (ROI) achieved in under two years

Impact: This project significantly strengthened Bosch's production capabilities by eliminating capacity constraints, ensuring consistent quality, and reducing operating costs. It also secured long-term machine capability for future product generations, reinforcing Bosch's commitment to operational excellence, smart manufacturing, and sustainable efficiency improvement.

PROJECT 4

Title: ***Ensuring First time right product quality by real time inspection and saving cost of assembling out of specifications parts: Online Capacitance Measurement on Capacitor Assembly Machines.***

Case Summary

TDK is a global leader in DC capacitors manufacturing having fully automated capacitor assembly machines. These machines produce 70 to 90 Pcs/ Min. If any deviation in product is detected in capacitance value, all capacitors get rejected at final testing. This was big loss of material, workforce, and cost also affecting on overall scrap percentage. The project was focused on sorting of out of specification parts before assembly without affecting productivity. OEM also not agreed to provide this type of design in machine manufacturing stage. TDK technical team accepted this challenge and designed installed and connected with machines program in house.

Problem Statement

Film Capacitors ordered by customer on its capacitance value in MFD +/_ tolerance. During Manufacturing metallized film winding done and produced wound elements at that stage capacitance value measured manually on sample basis 10 Pcs per 10,000 elements. But during winding due to raw material properties few pieces are going out of specifications. Also, sometimes other batch elements get mixed.

Solution:

TDK technical team worked on above problem and done feasibility study on assembly machine for capacitor measurement done. While implementing replaced machines element feeding gripper material from Stainless steel with brass and added Delrin insulator to isolate from machine body. After that, we selected high measuring speed capacitance meter and installed on machine with proper mounting and connected its go / no go signal with machine PLC and designed program to reject out of specifications elements before assembly. Horizontal deployment of this system is done on 17 Assembly machines.

Benefits:

- Enhanced online measurement system.
- Automated Alarm generation is consecutive out of specifications value.
- Increase operational efficiency.
- Elimination of assembly of mixed parts to Zero.
- 60-70% of product cost saving on rejected parts assembly due to early detection.
- Capacitance scrap percentage reduction in final testing by 0.2%.
- Operator confidence enhanced to produce right product as per customer requirement.

PROJECT 5

Title: Maintelligence – Maintenance With AI

Case Summary

Maintelligence - Maintenance with AI is an initiative aimed at making maintenance smarter, faster, and more user-friendly for engineers and technicians. The project focuses on leveraging GenAI, automation, and data analytics to enhance troubleshooting efficiency, streamline preventive maintenance, and enable data-driven decision-making across the plant.

Problem Statement

How can maintenance teams reduce time spent searching for information, simplify preventive maintenance tracking, and use machine data to move toward proactive decision-making while improving overall reliability?

Solution: Project Phases & Actions

Phase 1: GenAI-Driven Maintenance Support

Created a conversational maintenance chatbot using Google NotebookLM.
Trained the chatbot using Maintenance SOPs, machine manuals, and key reference documents.
Introduced QR-code access for shopfloor technicians to use during troubleshooting.
Result: Significant reduction in time spent searching manuals and ~68% reduction in MTTR.

Phase 2: Preventive Maintenance Process Optimization

Eliminated non-value-added activities within preventive maintenance.
Developed a PM Open Point Tracker using Power BI and Power Automate.
The tracker provides real-time visibility, sends automated reminders, and improves issue closure speed.
Result: More streamlined, transparent, and better-coordinated PM processes.

Phase 3: Data-Driven Insights & Predictive Capabilities

Building live dashboards for each production line to display operational status in real time.
Developing Machine Learning models using IIoT vibration sensor data and EMS system data.
Focus on uncovering hidden patterns and performing correlation analysis between machine health, energy usage, and other parameters.
Goal: Shift from reactive to proactive maintenance and support continuous improvement.

Impact

Maintelligence integrates AI, automation, and analytics to create a more efficient and future-ready maintenance ecosystem. It enhances support for technicians, strengthens decision-making for managers, and improves process reliability across the plant.

PROJECT 6

Title: Digital Transformation of Key Performance Matrix – For Warehousing

Case Summary

Since 1897, the Godrej Enterprises Group—including Godrej & Boyce and its affiliates—has been driven by an entrepreneurial spirit. The Commercial Division partners with G&B businesses with a primary focus on Outbound Logistics, Warehousing, Customer Support, Administration, and Infrastructure. The National Distribution Centre (NDC) under Commercial is a strategic location spread across 35 lakh sq. ft, supporting key operational and business requirements for both primary and secondary execution for over a decade. However, an emerging threat to this location had a direct impact on strategic imperatives. This project captures a remarkable journey of turning "Chaos" into "Control" by enhancing capacity without impacting cost or resources.

Problem Statement

Vehicular movement at the NDC was scattered, leading to operational "Chaos"—a situation that affected compliances, increased costs, weakened controls, disrupted operations, raised expenses, and compromised the organization's ability to comply with business competitiveness.

Solution:

The innovative solution reflects a focused journey of opportunity by:

- Mitigating risks to ensure uninterrupted business continuity
- Maintaining SLA adherence to meet customer requirements
- Ensuring on-time material delivery without delays
- Actively pursuing opportunities to reduce overheads and enhance efficiency
- Implementing stringent control measures across operations
- Safeguarding against profit leakage and mitigating risks by establishing the right practices at all levels

With the right strategies in place, Digitization played a pivotal role. There was a paradigm shift in how operations were executed—eliminating dependency on manual communication.

Instead of adopting industry tools, digitization was achieved using existing competency, skills, and platforms at zero investment. This introduced a transformation in systems, processes, deliverables, and most importantly, a cultural shift across teams.

Impact

This journey stands as a testament to innovation, commitment, and purpose-driven transformation —balancing profits with care for people and the planet. It demonstrates the spirit of pioneering progress for generations.

PROJECT 7

Title: Digital Transformation of Key Performance Matrix – For Warehousing

Case Summary

KSB, a German multinational and a global leader in pumps and valves, operates six manufacturing units in India. The Sinnar plant, established in 1994, is dedicated to the production of submersible and industrial pumps. In the submersible motor manufacturing line, the shot blasting and varnishing operations were highly repetitive, physically demanding, and operator-dependent. To reduce operator fatigue, improve quality, and enhance productivity, KSB decided to implement robot-based automation integrated with the existing machine setup. The newly installed robotic system eliminates dependency on operator skill, minimizes human intervention, improves consistency and quality, and significantly increases productivity.

Problem Statement

The previous process relied completely on manual operation.

Key issues included:

Varnish process dependency on operator judgement – the operator had to manually start and stop varnish supply by continuously monitoring varnish level.

Manual interventions during machine cycles, such as cycle start/stop, door open/close, nozzle adjustments, and varnish application, leading to operational errors and quality variation.

Manual loading and unloading of jobs inside the shot blasting and varnish station, causing severe operator fatigue due to weight and repetitive motion.

High handling time between shot blasting and varnishing, resulting in reduced productivity.

These challenges collectively led to operator fatigue, safety risks, inconsistent process quality, and lower output.

Solution:

To overcome the above constraints, KSB automated the existing machines and integrated them with a robotic handling system.

Key benefits achieved:

Robot-assisted job handling eliminated strenuous and risky manual operations such as loading and unloading, improving operator safety and reducing fatigue.

Minimized human intervention eliminated quality and operational errors related to manual decision-making.

Improved productivity through faster, accurate, and repeatable robotic cycles.

Elimination of operator skill dependency ensured consistent production quality.

Capability to handle multiple stator variants with different lengths, enhancing flexibility.

Provision for future scalability, enabling the same robot to be programmed for additional shop-floor activities if needed.

PROJECT 8

Title: *Enhancing AOI (Automated Optical Inspection) Performance and Efficiency through AI Deep Learning*

Case Summary

TDK India Pvt. Ltd., Nashik, aimed to overcome limitations of conventional rule-based AOI systems in capacitor manufacturing. The existing system suffered from high overkill and underkill rates, low machine efficiency, and manual setting challenges. By implementing AI deep learning technology, upgrading camera and illumination systems, and automating changeover processes, the project achieved:

- Overkill rate reduction from 25% to 8%
- Underkill rate reduction from 0.05% to 0.01%
- First Pass Yield improvement from 74% to 89%
- Changeover time reduction from 45 min to 10 min
- Productivity increase from 4,185 pcs/man-hour to 4,882 pcs/man-hour

Problem Statement

The conventional AOI system relied on pixel-based rule algorithms, which struggled with subjective defects like dirty boxes, resin variation, and lead deformation.

Limitations included:

- High false rejection (overkill) and missed defects (underkill)
- Poor image quality due to standard illumination during motion
- Manual camera and conveyor adjustments (29 settings per changeover)
- High operator skill dependency and long training cycles

Solution:

Development of Automatic Optical inspection machine with AI deep learning system

Key interventions included:

- Deep Learning Integration: Cognex Deep Learning Studio for defect classification and Optical Character Reorganization (OCR).
- Hardware Upgrades: High-resolution cameras (6.5 MP), customized strobed LED illumination for motion imaging.
- Automation: Motorized camera and conveyor adjustments, auto recipe loading.
- Image Training: 10,000 NG and 10,000 good samples trained for AI model optimization.
- Process Improvements: Reduced manual intervention, improved defect detection accuracy, and enhanced machine efficiency.
-High speed machine using high-performance dual GPU.

Results

- Overkill rate reduced by 68%
- Underkill rate reduced by 80%
- Changeover time reduced by 78%
- Productivity improved by 16%
- Successful implementation of AI tools for resin, box, lead defects, and OCR

PROJECT 9

Title: ***"From Manual Decisions to Autonomous Flow: E2E Automation in Inbound Logistics"***

Case Summary

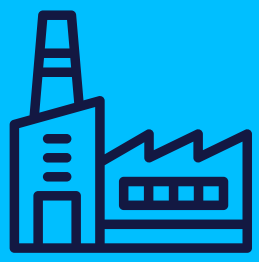
At Bosch, a major performance improvement initiative was launched to address a growing capacity crunch that had begun to impact production output and delivery commitments. E2E process automation in inbound logistics operation to achieve elimination in decision making in the operation which ultimately helps in productivity improvement.

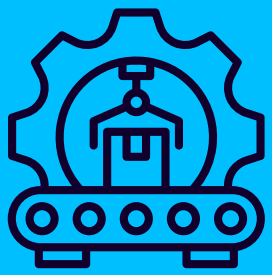
Problem Statement

Multiple agencies/Man-Power performing relay process leading increased wait time due to manual intervention at each stage of inbound operation.

Solution:

Use MIFA (Material and Information Flow Analysis) to identify Non-Value-Added (NVA) activity in operation and define digital strategy to eliminate them using standard and inter-operable solutions






PROJECT 10

Title: *Circularity Initiatives in PVC Film Sheet Manufacturing for Sustainable Cost Reduction*

MAHAMAYA POLYMERS
PVC FILM MANUFACTURING

Case Summary

Mahamaya Polymers chose to challenge the convention where production scrap was treated as an unavoidable loss. A recurring operational inefficiency—material losses from processes like edge trimming and blower shrinkage—became the catalyst for developing a transformative, closed-loop recycling system.

Problem Statement

Material losses arising from production processes (blower shrinkage, edge trimming, width adjustments, and manual handling) resulted in scrap that was sold at minimal recovery value. This resulted in cumulative financial leakage, increased production costs, and continued reliance on virgin materials.

Solution:

The solution was a structured intervention integrating technical innovation with managerial reform , leading to a closed-loop recycling system named S.C.R.A.P. (Scrap Collection & Reengineering for Advanced Production).

Technical: Scrap is systematically collected, size-segregated, shredded, and converted into a reusable input. The chemical composition was optimized to ensure the recycled compound consistently met the quality standards of virgin-based sheets.

Managerial: Institutionalized standardized scrap-handling procedures, introduced targeted workforce training, strengthened material accountability, and transitioned recycling from an ad-hoc activity to a monitored, controlled process.

PROJECT 11

Title: Optimizing Manufacturing Efficiency: NiSche (Nivid Scheduler)

Case Summary

In modern discrete manufacturing, production scheduling involves sequencing jobs across finite resources while complying with constraints like due dates, setup times, and capacity limitations. Traditional methods often fail amidst real-world variability, leading to bottlenecks and prolonged idle periods. NiSche, Nivid's flagship solution, addresses this by utilizing advanced simulation and optimization.

Problem Statement

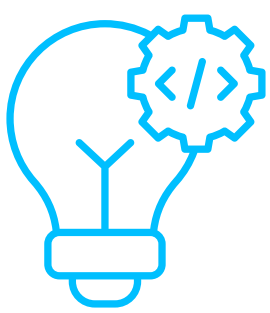
In discrete manufacturing systems, traditional scheduling methods (like static Gantt charts and basic rule-based heuristics) fail in the midst of real-world variability. Effective scheduling is a cornerstone of operational excellence, with fundamental objectives being to minimize makespan, reduce work-in-progress (WIP) inventory, and optimize resource utilization.

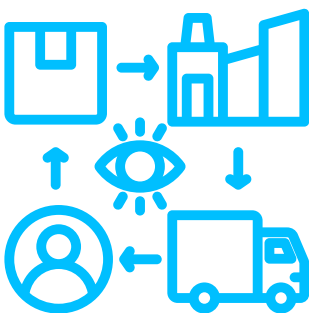
Solution:

The solution is NiSche (Nivid Scheduler), built on the WITNESS - Process Modeling, Predictive Simulation, and Optimization framework.

Technical: It uses Discrete Event Simulation (DES) to model production as a series of time-stamped events. Engineers build digital twins to replicate workflows and evaluate schedule viability against scenarios like equipment failures. Embedded optimization engines leverage advanced algorithms (genetic, heuristic, and constraint programming) to derive near-optimal schedules.

Benefits: Users can simulate millions of scenarios to find resilient plans. The system implements schedules that progressively shorten cycle times, minimize transitions, and increase delivery reliability, resulting in higher throughput and reduced operational costs.





PROJECT 12

Title: ***To Increase Productivity by Adopting Advanced Technology.***

Case Summary

Abhijeet Techno Plast aimed to address a critical issue with Delivery Schedule Adherence (DSA) for an acoustic box part. In March 2025, they supplied only 5,000 parts against a scheduled 6,500, resulting in 97% DSA and impacting their image. The team initiated a project to achieve 100% DSA by April 2025.

Problem Statement

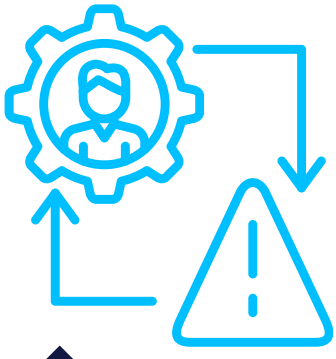
The organization faced a critical issue with Delivery Schedule Adherence (DSA) for the acoustic box part. Specifically, in March 2025, they supplied 5,000 parts against a scheduled 6,500, resulting in a 97% DSA for the month.

Solution:

After root cause analysis and idea generation through kaizens, the final solution was to develop and implement a new Hot plate welding machine.

Technical: Technical aspects included implementing an auto-clamp mechanism , providing an advanced brass connector cooling line for faster cooling , using an advanced welding die mechanism with a calibrated V-plate , and implementing an aluminium welding plate covered with a Teflon sheet.

Managerial: Actions included conducting training sessions for machine operators on new daily check-ups and monthly maintenance , and providing major support in obtaining cost approval from the customer and managing coordination.



PROJECT 13

Title: Elevating Customer Care: Gala's Commitment to Service Excellence

Case Summary

Gala, as India's No. 1 cleaning brand, is deeply committed to providing the best possible service experience to its growing customer base. In the competitive business environment, they proactively implemented several key enhancements to their customer care service in recent months.

Problem Statement

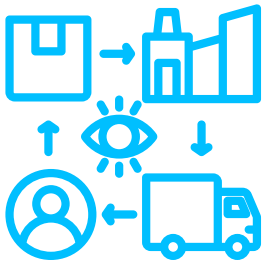
In today's highly competitive business environment, the company needed to meet the evolving needs of its consumers and strengthen consumer relationships by providing exceptional customer care.

Solution:

The company implemented strategic steps and focused on continuous improvement to enhance service excellence.

Strategic & Operational: Steps included adopting Live Abandon Calling to ensure all pending calls are addressed promptly, streamlining communication through Text Messages for simpler complaint/query registration, and optimizing the supply chain with Courier Service Enhancement to reduce delivery times.

Internal & Managerial: Focused on Schedule Optimization for better workload management and simplifying the ticket generation process. Commitment was solidified through monthly Structured KPI reviews and active Customer Satisfaction Tracking via surveys.



PROJECT 14

Title: Smart Camera-Based Inspection of Analog Panel Meter

RISHABH

Case Summary

This project aimed to automate the traditionally manual and operator-dependent testing of Analog Panel Meters (APM). The manual process presented challenges such as high skill dependency, subjective inspection, longer testing cycles, and inconsistent measurement accuracy..

Problem Statement

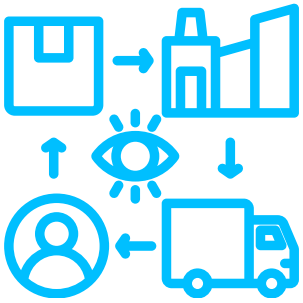
The testing of Analog Panel Meters (APM) was traditionally manual and operator-dependent, leading to key challenges: high skill dependency, subjective visual inspection, longer testing cycles, Customer Complaint, and inconsistent measurement accuracy.

Solution:

The solution involved developing a Smart Camera-based inspection system integrated with PLC and SCADA.

Technical: Key interventions included deployment of a Cognex IS 3805 Smart Camera for precise visual inspection , integration of a Yokogawa electrical source for controlled input supply , development of a PLC-based control architecture , and creation of a SCADA-based simulation interface for real-time monitoring and automated tests (like accuracy and sweep cycle). The system also automates report generation.

Managerial: Interventions included standardization of the testing process , reduction of operator involvement to only loading and unloading (minimizing skill dependency) , and implementation of digital documentation for audit readiness.



PROJECT 15

Title: Giving Wings to Trucks

Case Summary

Trulot—DPIIT-recognized, Startup India Seed Fund-supported, and supported by IOCL—has introduced a technology-enabled operating model that boosts truck productivity while improving driver livelihoods. Its SaaS-driven Captain-Pilot model™ allows a trained assistant (Pilot) to take over driving when the primary driver (Captain) is fatigued. This enables continuous yet safe truck movement, delivering the productivity of two drivers with only ~1.25 drivers. The model tackles operational inefficiencies, enhances fleet profitability, and creates aspirational rural employment.

Problem Statement

Long-haul trucking in India faces low asset utilization, high driver fatigue, safety risks, and difficulty attracting young rural talent. Fleet operators struggle to keep trucks moving without overworking drivers or increasing capex. This results in higher logistics costs, slower deliveries, and unsafe working conditions.

Solution:

- Smart Scheduling Assistant: Optimally assigns Pilots so Captains can rest without halting vehicle movement.
- Continuous Safe Operations: Reduces fatigue-related risks while maintaining legal, safe driving practices.
- Workforce Upliftment: Pilots work near home, return every 48 hours, and receive formal salaries enabling CIBIL-linked credit.
- Capex-Free Efficiency: Fleet operators gain 25% more utilization without additional EMI, insurance, NP, RTO, or fitness costs.

Key Results

- Deliveries completed 25% faster for shippers.
- 25% higher utilization for fleet operators with zero added capex.
- Up to 80% fewer accidents due to better-rested drivers.
- Higher variable earnings for Captains from diesel-linked savings.
- Stable, formal-income jobs for Pilots with improved quality of life.

Impact (UN SDGs Alignment)

- SDG 8 – Decent Work & Economic Growth

Creates steady, family-friendly rural jobs and enables financial inclusion.

- SDG 3 – Good Health & Well-being

Significantly improves driver rest and reduces accident rates.

- SDG 9 – Industry, Innovation & Infrastructure

Enhances logistics efficiency by 25%, strengthening India's manufacturing and supply chain ecosystem.

PROJECT 16

Title: ***Intelligent Water & Energy Management for Sustainable Industrial Growth***

SenseLive

Case Summary

enselive offers an integrated IoT platform that transforms utility data into actionable intelligence for industrial plants. Capturing high-frequency metrics from meters, tanks, pumps, transformers, and machinery, it bridges utility monitoring with strategic decision-making. Its cloud analytics and AI enable early anomaly detection, predictive insights, and efficiency gains, helping plants minimize losses, boost reliability, optimize resources, and advance sustainable growth.

Problem Statement

Industrial facilities face rising resource costs, stricter regulations, and sustainability demands. Yet water and energy two critical utilities are still tracked through fragmented systems, manual reports, and low-resolution data. This creates hidden leakages, unbalanced networks, inefficient pumps, idle energy use, peak-load penalties, poor power quality, and unexpected equipment failures. Without real-time visibility or predictive diagnostics, plants struggle to meet cost, compliance, and environmental goals.

Solution:

Water Management:

- Automated water balance across networks
- Real-time consumption mapping
- Intelligent leak detection
- Pump performance and health monitoring
- Recycling and ZLD-readiness analytics

Energy Management:

- Idle-load and abnormal-load detection
- Peak-demand forecasting
- Power quality and equipment health monitoring
- Renewable energy integration insights
- High-frequency IoT data is processed through cloud intelligence and AI-driven diagnostics, enabling actionable recommendations and predictive alerts.

Key Results

- 25-35% reduction in water wastage
- 10-18% savings in energy costs
- Higher equipment uptime and reduced downtime
- Improved regulatory compliance and resource resilience
- Enhanced visibility across the full utility lifecycle

Impact:

By unifying utility intelligence with operational insights, Senselive helps industries reduce expenses, strengthen reliability, and accelerate their journey toward net-zero. The platform enables a future-ready ecosystem where sustainability, operational continuity, and profitability advance together.

PROJECT 17

Title: *Optimizing Manufacturing: Integrating the Theory of Constraints (TOC) with ERPNext*

YAGNA

Case Summary

Yagna Entrepreneur Success Services Pvt. Ltd. partners with mid-sized manufacturers to improve profit, ROI, and cash flow—without additional capital expenditure. By applying the Theory of Constraints (TOC) inside ERPNext, an open-source ERP widely used by MSMEs, Yagna provides a structured way to identify the system's primary constraint and align all decisions around maximizing throughput and flow. This integrated advisory-technology approach transforms ERPNext from a passive data system into an active, real-time execution engine for manufacturing stability and growth.

Problem Statement

Manufacturing MSMEs face chronic operational instability due to high work-in-progress (WIP), stressed working capital, unclear shop-floor priorities, and frequent delivery delays. Limited visibility and lack of synchronized planning force leadership to make reactive, ad-hoc decisions in a VUCA environment. This constant firefighting leads to conflicting priorities, material shortages alongside surpluses, escalating operating costs, and unreliable delivery performance. These challenges undermine customer trust, profitability, and long-term growth.

Solution:

Strategic Buffer Management: Dynamic inventory buffers at critical control points ensure constant material availability while preventing overstocking, improving cash flow and stabilizing production.

Visual Priority Management: A real-time "traffic light" system gives the shop floor clear, unambiguous visibility into which orders need immediate action based on buffer status—eliminating confusion and conflicting priorities.

Automated, Synchronized Execution: Auto-generated Material Request Orders based on real-time consumption guide the exact sequence of production tasks, ensuring uninterrupted flow and on-time delivery.

This synchronized model minimizes WIP, eliminates production bottlenecks, and ensures consistent, reliable throughput across the plant.

Key Results

Lower WIP and faster flow through the plant.

Improved working capital and reduced material-related firefighting.

Clear, unified priorities for every stakeholder.

High, consistent on-time delivery performance.

ERPNext transformed into a real-time operations and growth engine.

Impact:

The TOC-enabled ERPNext system aligns strategic goals directly with on-ground execution, enabling MSMEs to achieve stable operations, higher throughput, and sustainable profitability—without additional investment.

PROJECT 18

Title: ***"Turning Flax Waste into Wealth: Textile Innovation from Linseed Stems"***

Case Summary

Flax seeds, available in brown and yellow varieties, are valued for their health benefits and oil, but their stems—often treated as waste—offer untapped potential for textile production. By extracting fiber from these stems, communities can create linen-like fabrics, generate extra income, and minimize waste through improved traditional processing techniques.

Problem Statement

Before the structured linseed fibre extraction process, the following challenges existed:

1. Underutilization of Linseed Stems - Farmers typically harvested linseed only for seeds and oil. The stems were often discarded or burnt, causing waste and environmental impact.
2. Lack of Awareness of Textile Potential - Communities were unaware that flax stems could produce linen-quality fibres. Low utilization prevented income diversification for farmers and weavers.
3. Manual, Labour-Intensive Processes - Traditional extraction methods required long retting, drying, crushing, and cleaning cycles. Manual fibre separation was slow and inconsistent, limiting scalability.
4. Low Product Standardization - Yarn quality varied due to manual spinning techniques. Fabric production relied heavily on handlooms without guidance on uniformity.
5. Limited Market Linkages - Finished products lacked branding, promotion, or organized market access.

Solution:

1. Harvesting and Separation - Seeds and stalks are harvested and separated from the plant. The root and branches of the stalk are trimmed for uniform processing.
2. Retting - Stalks are soaked in water for 5-7 days to loosen the outer layers.
3. Drying & Crushing - After retting, stalks are sun-dried. A machine crushes the dried stalks to release the fibre bundles.
4. Fibre Cleaning - The crushed stalks are cleaned manually to separate fibers from woody pieces.
5. Yarn Making Fibres are spun into yarn using traditional clay-pot techniques.
6. Fabric Weaving - The yarn is woven into cloth using a handloom. Finished fabric undergoes washing and dyeing.
7. Value-Added Products - Food and craft products such as linseed sauce, laddoos, roasted seeds, khatai biscuits, chikki, namkeen, and herbal items are also produced from seeds. This enables complete utilization of the crop—both seeds and stems.

Key Benefits Achieved: The waste-to-wealth initiative transforms discarded linseed stems into valuable textile fibers, reducing residue burning and promoting sustainability. It creates livelihoods by enabling farmers to earn from stem sales and providing weavers with new raw materials. Standardized processing and partial mechanization enhance fiber quality and output efficiency. The resulting biodegradable linen-like fabrics support eco-friendly production through low-energy traditional weaving. With proper training, branding, and promotion, these textiles can access niche markets in eco-fashion, handicrafts, and natural fiber blends.

PROJECT 19

Title: "A Scalable Model for Modern Agripreneurship"

Case Summary

Nisty Farms, led by agripreneur Sunthan Anil Patil, runs a diversified organic farming system across dairy, oilseeds, moringa, coconut, and sugarcane. The farm integrates modern tools—drones, biogas, cold-pressed oils, and farmer training—to create a sustainable, tech-driven model with strong customer demand.

Problem Statement

Small and mid-sized farmers face unstable income, low margins, and limited market access due to fragmented planning, traditional practices, lack of value addition, and weak distribution. Dependence on intermediaries, inconsistent quality, and minimal tech adoption restrict scalability and long-term resilience.

Solution:

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TESTIMONIALS
By Jury Members

It was a pleasure and honor to be a part of SCOPEX 25 event as a jury member . SIOM and Symbiosis institutes are known by their high caliber education in field of Management education,SIOM being leader in Management studies in Manufacturing arena.
SCOPEX was organized in a manner which held true to high standards of SIOM. The participants in the event were all marque manufacturing companies , some MNCs. It was refreshing to see the participants showcasing improvements in areas of Lean manufacturing, defect elimination and productivity improvements. With my manufacturing experience, it was also a good learning session for me.
Thanks for inviting me to this event. Looking forward to many more "exchange of knowledge session" with your team

Mr. Sayaji Jadhav
DGM, Manufacturing Engg. at Mahindra & Mahindra

It was an absolute honour to serve as a jury member at SCOPEX, hosted by the Symbiosis Institute of Operations Management, Nashik. The event was planned well with seamless coordination. SCOPEX provides an excellent platform for showcasing impactful improvement projects from some of India's leading corporations, and I was truly impressed by the depth of analysis, clarity of thought, and practical relevance demonstrated by the participating teams. What particularly stood out was the diversity of projects—spanning operational excellence, digital transformation, and sustainability. The passion and ownership displayed by the participants reflected not only their commitment but also the strong culture of continuous improvement within their organisations. The thoughtful structure of the event, combined with insightful interactions, made the entire experience enriching and enjoyable. I look forward to staying connected and contributing to future editions of SCOPEX.

Mr. Ankur Gandotra
Head, Industry - Academia Partnerships, IFQM

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Ms. Varsha Vikhe

Sr. Manager, ABB, India

Dr. Rakesh Kumar Gautam

Faculty Marketing Management, LPU

My experience with SCOPEX at the Symbiosis Institute of Operations Management was truly enriching. The platform brought together insightful discussions, practical industry perspectives, and hands-on learning that bridged the gap between theory and real-world operations challenges. I was particularly impressed by the quality of speakers and the interactive sessions, which encouraged meaningful dialogue and fresh ideas. SCOPEX created an engaging environment where students, professionals, and experts could connect, collaborate, and grow. Overall, it was a well-organized and impactful event that strengthened my understanding of operations excellence and inspired me to think more strategically about the future of the field.

Participants of SCOPEX

GLIMPSES of SCOPEX'24

SCOPEX'24 Championship - Lamp Lighting

SCOPEX'24 Championship - Organizing Team

SCOPEX'24 Championship - Winners

GLIMPSES of OPEX'24

OPEX'24 Championship - Lamp Lighting

OPEX'24 Championship - Organizing Team

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Thank You Note

"Teamwork is the ability to work together towards a common vision, the fuel that allows common people to attain uncommon results"

-Andrew Carnegie

We extend our profound and heartfelt gratitude to every individual and organization whose dedication and contributions transformed this edition of SCOPEX into a remarkable success. The enthusiastic participation of innovators and practitioners, who showcased exceptional ideas and operational excellence, truly embodied the spirit of this prestigious platform. Their commitment, creativity, and pursuit of excellence elevated the quality of the event and reaffirmed SCOPEX as a benchmark for showcasing transformative practices in operations and supply chain management.

We express our sincere appreciation to our esteemed jury members and mentors for their invaluable insights, thoughtful evaluations, and unwavering guidance throughout the journey. Their expertise played a pivotal role in maintaining the high standards of the event. We are also deeply thankful to our respected faculty, industry leaders, and generous sponsors whose continuous support, encouragement, and partnership greatly enhanced the scale, relevance, and success of SCOPEX. Their belief in the vision of this platform has been instrumental in its sustained growth.

A special note of gratitude is reserved for the entire SIOM family including our leadership, faculty members, students, volunteers, and organizing team whose tireless efforts, collaboration, and dedication ensured the flawless execution of the event. As this magazine captures the defining moments, inspiring ideas, and collective achievements of SCOPEX, we hope it stands as a lasting testament to excellence, teamwork, and innovation. May it continue to inspire all of us to strive for greater heights and contribute meaningfully to the ever evolving field of operations management.

-Team SCOPEX'25

Heartfelt Gratitude

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Thank You

Extended Gratitude

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