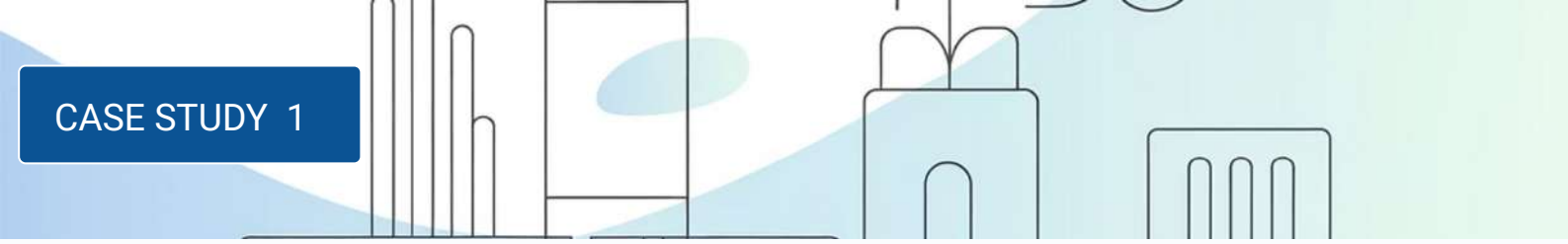


CASE STUDY 1

New Product Category Innovation

Cross-Disciplinary R&D Leadership in Heating & Air-cleaning

The Challenge

Our client needed to develop an entirely novel product category from scratch: a new heating device with a heat-booster and an air-cleaning function. The mandate involved leading R&D engineering and product development while actively **de-risking technical innovation** in a highly complex b2b2c market sector.

A key hurdle was the enterprise's traditional **siloed structure**, requiring expertise from two independent business units to collaborate effectively on the R&D activities.

My Contribution

I led the innovation and R&D project from concept to prototype, introducing advanced **CFD (Computational Fluid Dynamics) simulation** into engineering and product development workflows. This structured approach streamlined the development process.

My expertise in cross-expertise R&D project management was crucial, fostering collaboration between the distinct business units and expertises. This allowed for the **timely achievement of double-expertise technology functions** and optimized product outcomes.

Key Outcomes & Impact

Accelerated R&D Cycles

Significantly reduced development timelines through integrated simulation and testing iterations and structured project management.

Data-Driven Decision Making

Established a **robust simulation-testing-results driven approach** for evaluating and refining product designs.

Introduced design engineering and materials compatible with **circular economy design**.

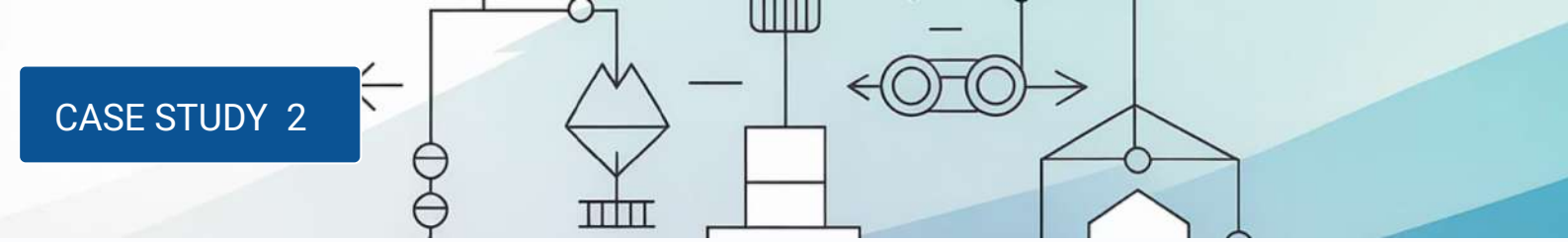
Enhanced Cross-Unit Collaboration

Successfully **integrated expertise from distinct business units**, overcoming organisational silos for optimal results. Introduction of matrix-organization project management processes.

De-risked Innovation & Performance

Systematically addressed technical challenges, ensuring the new heating device concept progressed safely and efficiently. **Aligning R&D engineering and product design objectives** to achieve a product with high technical performance and stylish design.

CASE STUDY 2



Sales & Operations Planning Transformation

Energy Sector Manufacturing Client

The Challenge

A national energy-sector manufacturer faced significant coordination challenges between sales, operations, and production planning functions. Siloed departments led to planning opacity, misaligned priorities, and operational inefficiencies. The lack of integrated processes resulted in inventory imbalances—excessive final product stocks coupled with component availability issues in final assembly operations.

The organisation needed a systematic approach to unify demand forecasting with production capacity, enabling proactive decision-making and resource optimization across the supply chain.

My Contribution

Designed and implemented a comprehensive S&OP process at national level, establishing cross-functional governance and standardized planning cycles. Created transparent demand forecasting mechanisms, integrated production scheduling, and real-time visibility dashboards.
Facilitated stakeholder alignment workshops, established KPI frameworks, and embedded continuous improvement protocols to ensure sustained adoption.

Transformative

Planning Transparency

Established real-time visibility across all planning functions through integrated dashboards and standardised reporting protocols.

Cross-Functional Alignment

Achieved unified objectives across sales, operations, and production through collaborative monthly planning cycles and governance structures.

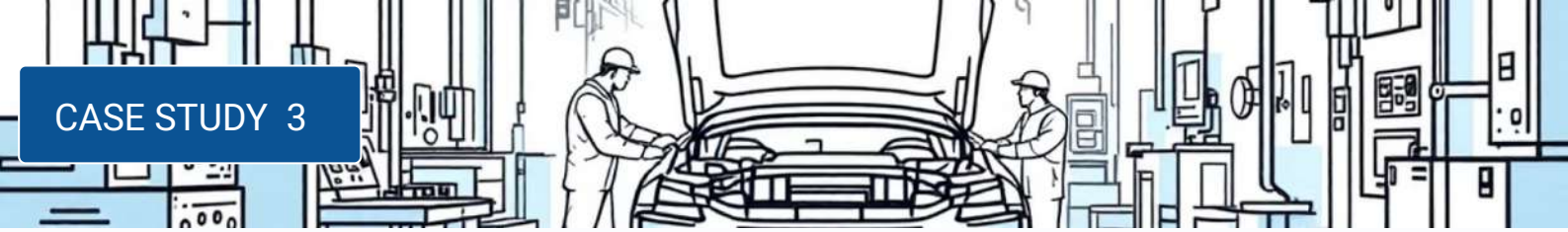
Operational Efficiency

Streamlined production planning processes, reducing lead times and improving resource allocation accuracy.

Inventory Optimisation

Enhanced component availability planning in final assembly, whilst strategically reducing finished goods stock levels.

> *"The S&OP implementation delivered immediate operational benefits whilst establishing a foundation for continuous improvement. The process created clarity across previously disconnected functions and enabled data-driven decision-making at all levels."*



Vehicle Plant Crisis Management

Strategic Intervention in Automotive Quality (International)

The Challenge

A critical, end-of-line quality defect threatened to halt production at an international vehicle manufacturing plant. The issue, if left unresolved, posed immediate risks of significant financial losses from production delays, consequent need of rework of vehicles after end-of-line, potential penalties, and severe damage to the brand's reputation for quality. The situation demanded an urgent and highly coordinated response involving multiple stakeholders across the global supply chain and internal plant operations.

My Contribution

I took immediate leadership, initiating a comprehensive, structured failure analysis to rapidly diagnose the root cause of the quality anomaly. This involved meticulously coordinating efforts between internal plant teams – including production, quality assurance, and engineering – and specific R&D expertise ressources as well as critical international suppliers. My focus was on fostering a collaborative environment to expedite problem-solving, leading a thorough root-cause analysis and implementing rapid, effective rework strategies to resume and maintain continuous production while addressing the underlying issues.

Key Metrics

0

Production Delay
No production line stoppage.

€4M

Cost Savings
Realised within three months due to swift resolution.

Impact & Outcomes

Production Maintained

Successfully prevented a complete stoppage of the vehicle production line, ensuring continuity of supply and avoiding significant operational disruption.

Substantial Cost Savings

Achieved a saving of €4 million within three months by mitigating losses from potential production delays, avoidance of consequent powertrain scrapping, rework, and associated penalties.

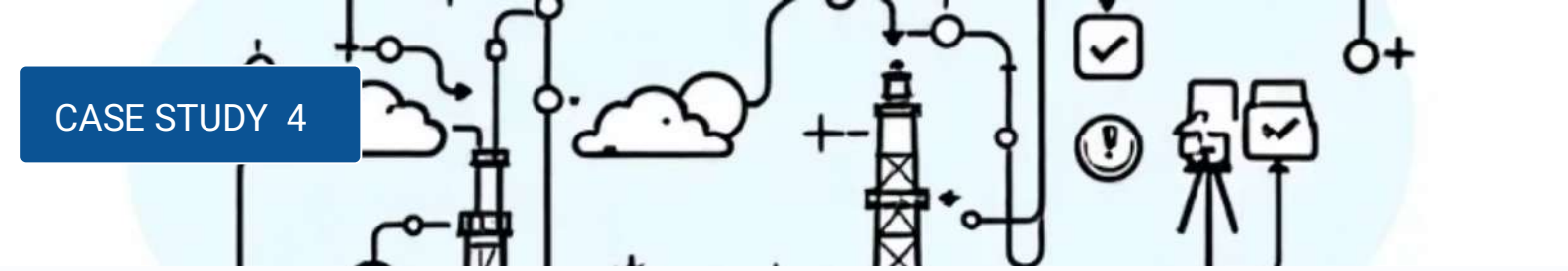
Rapid Problem Resolution

Implemented and led an efficient root cause analysis and coordinated rapid rework, enabling a swift return to normal quality standards and production output.

Enhanced Cross-Functional Alignment

Strengthened collaboration between plant teams and international suppliers, establishing a more robust framework for future quality management and crisis response.

CASE STUDY 4



Value Chain & Quality Processes

Optimising Operations for an Energy Sector Manufacturer

The Challenge

Our client, a prominent energy plant technology manufacturer, was challenged to significantly elevate both the efficiency and quality within their just-in-time assembly plant value chain. Operating in a highly regulated and technically demanding sector, any process inefficiencies or quality discrepancies had profound implications, ranging from substantial financial penalties to project delays and reputational damage. The existing operational framework, while functional, lacked integrated quality assurance mechanisms and suffered from process bottlenecks that impeded agility and responsiveness to evolving market demands.

My Contribution

I conducted an in-depth value chain analysis to meticulously map out end-to-end processes. This involved identifying critical bottlenecks, pinpointing areas of waste, and optimising resource allocation. A core component of my strategy was the introduction of robust **quality-gate processes** at key stages of manufacturing and assembly, alongside the implementation of **efficiency measures** to streamline the lean workflows and reduce lead times. This structured approach not only addressed immediate operational challenges but also established a framework that fit the continuous improvement of lean production.

Impact & Outcomes

Enhanced Operational Efficiency

Streamlined core manufacturing and assembly processes, leading to measurable reductions in operational waste and improved throughput.

Robust Quality Assurance

Implemented stringent quality-gate protocols, significantly reducing defects and rework, and bolstering product reliability in the field.

Empowered Decision-Making

Provided functional leaders with clearer data and insights from the enhanced value chain, facilitating more informed and timely strategic and tactical decisions.

Strengthened Organisational Robustness

Reinforced the Lean production culture of continuous improvement and proactive problem-solving, making the value chain more resilient to future challenges and market shifts.

CASE STUDY 5

Global Powertrain R&D Leadership

International Compliance & Innovation for Euro 0 up to Euro 6

The Challenge

A critical mandate to develop and adapt to specific vehicle families compliant diesel powertrains for worldwide markets, navigating the complexities of Euro 0 to Euro 6 regulatory frameworks. This required leading intricate R&D efforts across a global footprint, ensuring technical innovation met stringent environmental standards while achieving successful market entry.

The challenge was amplified by the need to coordinate diverse R&D, testing, and manufacturing teams spread across multiple continents, demanding exceptional **technical guidance and cross-cultural understanding**.

My Contribution

I spearheaded international R&D programs with budgets up to €8M, overseeing the entire lifecycle from development and validation to certification across six continents. My role involved bridging technical expertise across R&D powertrain engineering, testing, and manufacturing teams located on 3 continents. Crucially, I ensured clear communication, leveraged deep combustion powertrain engineering knowledge to guide cross-expertise collaboration, and fostered inter-cultural understanding to drive these complex projects to successful global market launches.

Key Metrics

€8M	6	3
Budget Managed	Continents Certified	Regions Coordinated
Managed international R&D programs.	Oversaw certification across six continents.	Spanned R&D teams across three distinct regions.

Impact & Outcomes

Global Compliance Achieved

Successfully navigated complex Euro 0 to Euro 6 regulatory landscapes to ensure powertrain compliance across diverse international markets.

Technical Excellence Driven

Drove advanced combustion powertrain engineering, delivering high-performance and environmentally compliant diesel technologies.

Cross-Cultural Collaboration Fostered

Fostered effective collaboration and communication among R&D, testing, and manufacturing teams spanning three continents.

Budgetary Oversight Ensured

Managed international R&D programs with budgets up to €8M, ensuring efficient resource allocation and timely project completion.