

Omar HROUCHI

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Project Manager



Professional with 11 years of experience on Industry with leading Project development, Project management, Product design, Test Validation activities, Technical Hard & Software competencies

PROFESSIONAL EXPERIENCE

October 2024–Present: RATP/MILLA, Meudon – Project Manager, Autonomous Vehicle Systems

- Defined and drove the product roadmap for the integration of autonomous vehicle systems, ensuring alignment with organizational goals, market needs, and industry standards.
- Translated customer and operational requirements into clear product specifications and milestones, balancing technical trade-offs and delivery timelines.
- Led cross-functional collaboration with hardware, software, safety, and operations teams to deliver a cohesive HW-SW system.
- Lead Project Manager and coordinator of a strategic consortium composed of RATP, UTAC, and MILLA, funded under the French Programme PIA operated by Bpifrance, focused on the development and deployment of autonomous vehicle technologies.
- Project supported by Île-de-France Mobilités (IDFM) and Île-de-France Region, integrating public transportation policy and innovation into the consortium's roadmap.
- Oversaw supply chain and manufacturing partners to secure timely, cost-efficient delivery of key components.
- Established KPIs and dashboards to continuously refine the product, incorporating customer feedback and performance data into iterative improvements.
- Ensure robust safety compliance and sustainability integration throughout all project phases.
- Facilitate continuous improvement, leveraging agile methodologies and partner feedback to adjust strategy and execution dynamically.
- Act as the central liaison between public institutions and industrial partners, including engagement with Bpifrance for reporting and fund management.

October 2023– September 2024: APTIV, Epernon – Product Engineering Manager (HW-SW Systems)

- Lead the RFQ process for Circuit Breaker components, including safety-related modules (PCBs, Mechanical components, Relays, Insulation elements, Harness and Busbars)
- Lead the design and development of circuit breakers, coordinating mechanical, electrical, and thermal engineering teams
- Managed a diverse, cross-functional team (USA, Poland, Germany, Spain, China, India, Mexico...), providing leadership and guidance to drive change and ensure successful project execution
- Implement change management initiatives by driving continuous improvement throughout the RFQ process and adapting to evolving industry standards and customer requirements
- Spearheaded all technical interactions with major automotive customers (France, Germany, USA) facilitating adaptation to shifting project objectives and ensuring alignment
- Conducted comprehensive risk assessments for circuit breakers and other components, applying mitigation strategies to address potential risks to Customer
- Managed product cost estimation, including parts, plant operations, development, and software/hardware integration
- Negotiated pricing and terms with suppliers, focusing on cost-efficiency and supply chain stability to reach a competitive product price
- Prototypes Management with the plant, ensuring accurate manufacturing and testing of prototype units
- Rigorously monitored supplier performance (ERP), implementing corrective actions to maintain project milestones and quality standards, and promoted process improvements until project award

February 2023– October 2023: Valeo Lighting System, Paris – R&D Product Technical Manager

- Managed the development and after-sale support of advanced lighting system components, integrating mechanical/electrical design principles and automation for enhanced performance
- Coordinated the RFQ process for critical components, focusing on quality, cost-effectiveness, and continuous improvement
- Implemented advanced change management practices, driving continuous improvement in component development and integration processes
- Lead a cross-functional competencies team (USA, Spain, China, India, Germany...)
- Driving change management efforts in the design and integration of lighting system components into vehicle platforms
- Supervised the integration of new technologies into lighting systems, including the development of custom test rigs to simulate real-world conditions
- Acted as the primary interface with main automotive customers, facilitating adaptation to evolving requirements and ensuring project alignment
- Addressed crises related to microprocessor components, implementing solutions to ensure reliability and performance of lighting systems under varying operational conditions
- Negotiated pricing and terms with suppliers, implementing cost reduction strategies and enhancing cost-efficiency and supply chain reliability
- Monitored supplier performance, implementing corrective actions and driving process improvements to maintain quality standards
- Developed and maintained roadmaps for development, ensuring comprehensive validation of mechanical and electrical aspects of lighting systems
- Managed project timelines and budgets, ensuring all parts were delivered on schedule and within financial constraints
- Utilized ERP systems for managing project documentation and supplier interactions

Mars 2020– February 2023: PSA E-Motors Poissy – Project Manager responsible of Test & Validation

- Defined validation plans and requirements for electrical engines & Inverters, including specifying and coordinating extensive testing campaigns
- Managed the specification and RFQ process for testing campaigns, ensuring all technical requirements were met
- Oversaw supplier contracts and managed testing facilities (IAV, AVL, FEV...)
- Developed and automated testing benches to meet specific validation requirements, including endurance, thermal behaviour, NVH, and mechanical robustness
- Preparation, construction and commissioning of test setup in various tests configurations (Rotor, Stator, B2B & e-Axes tests)
- Managed projects from RFQ through to production, including defining objectives, planning schedules and budgets, executing design and implementation, monitoring progress and quality, and overseeing commissioning and closing

- Designed and integrated automated systems in test facilities, optimizing testing processes and calibrating automated test benches
- Utilized CAN analysis to connect and monitor electric engines and inverters, ensuring precise data acquisition and integration
- Effective project tracking and resource management and providing technical improvement proposals to Product development core competencies

September 2016 - Mars 2020: RENAULT, Guyancourt - Components leader

Mission: Turbo-Charger components leader (Turbocharger, Actuator, Compressor, Valve...)

- Defined design rules and specifications for turbocharger systems, focusing on performance and integration
- Led the development of turbochargers in collaboration with suppliers, overseeing design, testing, and integration such as Sonceboz, Mahle, and Garrett...
- Developed and implemented test benches for evaluating rotor and turbine durability under extreme conditions
- Managed RFQ processes and negotiated technical and cost terms
- Conducted FMEA and KPI tracking to monitor and address serial life failures and component performance
- Implemented new testing methods and integrated advanced data acquisition techniques
- Led cross-functional teams to develop solutions for mechanical design challenges, enhancing durability
- Collaborated with R&D to incorporate new materials and technologies into turbocharger designs
- Ensured compliance with industry standards and managed certification processes
- Project QCDP management (MS-Project, JIRA...)
- Technological awareness, competitive assessment, and benchmarking activities

Mission: Top-engine components leader (Valves, Stem seal, Cylinder seat...)

- Defined and updated design standards for components like valves and cylinder seats, ensuring performance
- Led the development of components in collaboration with suppliers as Federal Mogul, Freudenberg, and Schaeffler
- Developed custom test benches to assess component reliability under high-stress conditions
- Managed RFQ processes and negotiated with suppliers
- Implemented supplier management strategies and monitored performance for quality compliance.
- Conducted competitive benchmarking and technological assessments to drive innovation.
- Managed QCDP aspects using MS-Project and JIRA to ensure timely, cost-effective solutions.
- Developed strategies to reduce serial life costs and optimize component processes.
- Collaborated with engineering teams to integrate new components into production effectively.
- Technological awareness, competitive assessment, and benchmarking activities

Mission: Gearbox components leader (Gears, Actuators...)

- Managed functional requirements for gearbox systems, ensuring alignment with performance specifications
- Lead development of Robotic gearbox for Gasoline Engine
- Developed roadmaps for testing procedures and validation of gearbox systems.
- Integrated actuators into gear systems, enhancing operational efficiency and performance.
- Defined material rules and standards for gearbox design, focusing on durability and reliability.
- Oversaw validation activities, including numerical simulations and physical tests to ensure system accuracy

September 2015 - September 2016: SAFRAN, Magny-les-Hameaux - R&D Engineer

Mission: Development of new gears definition for the Aircraft Engine project LEAP

- Developed a new single gear tooth bending fatigue test for the Aircraft Engine project LEAP, applying localized stress at the root of the gear tooth to evaluate treatment efficiency.
- Designed and implemented a specialized test bench for gear testing, enabling precise evaluation of gear performance and treatment effectiveness.
- Conducted FMEA analysis and developed related FEA models to propose and evaluate improvement solutions.

EDUCATION

2016: Advanced Master's (bac +6) in Materials and Structures Design at Mines ParisTech,

Completely supported by SAFRAN

2015: Double-degree at Arts & Métiers ParisTech (ENSA)

- Research Master's degree « Mechanics, Materials, Structures, Processes »
- Arts et Métiers Engineer (ENSA)

OTHER SKILLS

Management: Project management, risk management, Production and maintenance oversight, Change management, Supplier negotiations, Industrial risk assessment, continuous improvement, technical problem-solving

Technical: Electric accreditation, Mechanical systems, automation integration, electrical systems, CAN analysis, material specifications, failure mode and effects analysis (FMEA), process optimization.

Programming: MATLAB, SQL, Python

IAO: CATIA V5, Concerto, ABAQUS, Z-Set, ANSYS, Forge, AUTOCAD, LMS Virtual.Lab

Languages:

English: C2 (both spoken and written)

French: Native

Arabic: Native