



Senior Engineer, Research – Job Description

(Job Code and Level: ERES003.1)

Definition:

Research is defined as: Blue sky thinking and research into new technology (10 years before development phase). Systems and methodologies that will improve the vehicle either for the customer and meet future legislation, recognising as well future needs and developments in other areas. For example, integration of new technology which has been developed outside of the automotive industry such as I-Phone technology or looking into future hybridisation strategies, lowering emissions, etc.

Overall Purpose of the Role:

Research and develop new and existing processes, devices, technologies, materials and techniques to provide best in class performance in the chosen products and markets of the business, including investigating how the product behaves under differing and certain conditions. Responsible for certain project management and business deliverables. To be aware of research developments across the field of specialism and utilise to inform work. Responsible for multiple highly complex major projects requiring innovative original solutions where results are key to successful completion of major projects. Work mostly independently with minimal supervision and work is reviewed at project milestones and/or on completion by Senior Management.

Key Responsibilities:

General and Task Management

- Plan projects: estimate, track and complete projects on time and within budget
- Participate in all aspects of projects, from initial investigation and concept development through to delivering a cost effective useable solution
- Carry out research into new and existing processes, devices, technologies, materials and techniques
- Develop ideas for further investigation
- Research what others have done and what outcomes they have achieved
- Design experiments to test ideas and prove out
- Analyse data provided from tests and experiments and progress learning to gather knowledge and understanding of the subject of research

- Review results and continue to develop to the point of delivery required to progress into mainstream engineering
- Compare and contrast different approaches, methodologies, materials to develop the best outcome
- Work with other team members and the wider engineering community to develop and maintain good relationships with internal and external contacts at all levels including other companies, universities and research institutes
- Assess and collect technical information
- Arrange the gathered technical information and analyse technology trends
- Review of competitors solutions, investigating the research activity of other manufacturing companies, research institutes and universities
- Keep up with current and developing engineering trends, arrange the gathered technical information and analyse
- Capture requirements and turn aspirational company or customer goals into well-defined, achievable and testable specifications
- Integrate and produce test functionality platforms
- Review of available components
- Contribute to product and technology development planning
- Review of patents and create patent portfolio for IP generation
- Create New Product development proposals
- Plan and execute project work
- Create concise Design Manual and Product documentation, reports and version release notes
- Write proposals and reports with all necessary backup material and present progress at project meetings and to clients
- Keep up with current and developing engineering trends
- Contribute to product and technology development planning
- Estimate budgets and manpower required for projects
- Develop engineering principles, theories and concepts
- Develop technical relationships with key suppliers and business partners
- Develop innovative solutions to unique problems
- Undertake special projects as required
- Contribute to continuous improvement activities
- Quality control of work by appropriate reviews
- Support and lead process improvement activities
- Achieve goals within budget
- Conduct benchmarking studies to determine best practices/designs and future trends
- Plan and execute project work, tracking and presenting them
- Deliver the Key Performance Indicators (KPIs)
- Attend various meetings and action/communicate instructions
- Produce written reports and make presentations
- Undertake continuous training and development and develop and maintain expertise
- Perform root cause analysis and resolve problems

People Management

- Lead a group of engineers and technicians
- Train both team and broader organisation members and provide guidance to several groups of the organisation.
- Provide technical expertise to the team
- Manage contractors on site to ensure they meet legal and company requirements

Relationship Management

- Work with other team members of the wider engineering team
- Develop and maintain good relationships with internal and external contacts at all levels including other companies, universities and research institutes
- Develop technical relationships with key suppliers and business partners
- Manage and work with vendors
- Represent work team at reviews and cross-organisational team meetings
- Liaise and communicate with other departments, customers, suppliers and other service providers
- Attend various meetings and action/communicate instructions

Self Management

- Comply with the Health, Safety and Environmental Policies
- Embraces personal challenge
- Confident, rounded thinking
- Is self aware and optimistic
- Assertive, resilient and welcomes change
- Engages interest and participation of others and has a collaborative approach to working with others
- Proactively contributes to the team
- Actively Committed to team development

Skills and Attributes:

- Exercise substantial initiative/judgement in work methods and interpreting goals
- Exercise considerable initiative/judgement in work methods and in interpreting and delegating work requirements/goals
- Work independently and is reviewed infrequently with minimal supervision
- Excellent verbal and written communication skills
- Communicate with clarity and demonstrate excellence in approach to work and people activities
- Excellent organisation skills
- Excellent problem solving skills
- Ability to manage a wide variety of activities at the same time
- Ability to plan, analyse and challenge
- Able to work cross functionally and collaboratively with many stakeholders
- Solid understanding of all people related processes and procedures
- Financial acumen with ability to balance material usage
- Able to identify root cause of any losses

Qualifications and Experience Levels:

- Relevant manufacturing/engineering degree preferred, HNC, BTec Professional Level 4 Award or equivalent NVQ Level 4 qualifications.
- Membership of a industry related professional body would be advantageous
- Experience of leading and developing (multi-skilled) people
- Strong PC skills and experience of packages such as SAP (Standard Analyses: Purchasing Information System)
- Knowledge of lean manufacturing techniques and recognised QC tools
- Knowledge of Health & Safety legislation including ISO14001 and responsibilities
- Knowledge of Quality standard TS16949

Example roles this job description may cover:

- Team Leader