**Job Description**

**Job Title: Technology Specialist - Business and Factory Optimisation (Special Projects)**

**Career Level: 3**

**Department or Business Sector: Business and Factory Optimisation,**

**Digital Engineering**

**Location**: Coventry

**Reporting to (manager’s job title): Department Functional Lead or Designated Resource Manager**

|  |  |
| --- | --- |
| **Heading:** | **Description** |
| 1. **Job Purpose / Impact** | As a Technology Specialist (TS), your role is primarily focused on the independent expert technical delivery of projects and large programmes of work and leadership in the development of project related activities across the MTC, working across various technology departments and industrial sectors.  You will be expected to lead project technical deliverables, taking ownership to ensure work meets or exceeds agreed customer requirements, and is delivered within agreed budgets and timescales. Where delegated, to act as Technical Governance lead for project deliverables.  You will undertake innovative Engineering research work in your field of expertise and across a broader MTC technology area, focused primarily on technology/manufacturing readiness levels (TRL/MRL) 3+, and able to demonstrate industrial project delivery.  You will support Senior Managers with a proactive approach in the identification, technical specification, and delivery of new and novel technology capability into the MTC, customers, or industrial members premises.  You will require involvement in all aspects of the project delivery, taking overall ownership and ensuring compliance with all relevant standards, technical support of commissioning, management of project budget and deliverables.  Where required, the role may take additional responsibility to support the leadership, and carrying out of, a specific functional role within a Technology function or large program of work within the MTC’s Technology Group or Industrial Sectors.  You may be expected to work collaboratively with colleagues in the management teams within the Technology Group and Industrial Sectors to deliver the corporate objectives of the MTC and ensure alignment and effective delivery of functional and business unit strategies.  Where applicable, you will work with colleagues in the functional roles to deliver the corporate objectives of the MTC and ensure alignment and effective delivery of functional strategies.  You will be required to collaborate closely with colleagues in the same management team to deliver the objectives of the business unit or large project. This requires an ability to influence people outside your line management in order to drive the best result for the MTC holistically and not just for a small element of the company.  The role offers the opportunity to work with senior managers to deliver the corporate objectives of MTC and to lead, or contribute to, specific business initiatives or continuous improvement activities.  On an as required basis, you will work collegiately with all or some of the High Value Manufacturing Catapult network of centres, MTC’s academic partners & Members and appropriate sub-contractors to strengthen our eco-system’s ability to support our clients and stakeholders.  In delivering the role, you will represent the MTC’s and the role’s interests at all internal and external meetings, as required.  There is also the need to work with MTC’s Marketing Department to produce case studies and other media that demonstrate the impact that MTC is having, whilst respecting client confidentiality at all times.  Coaching and mentoring direct reports, and other colleagues as required, is an essential part of your role to support the development of leadership and management capability across the business.  You will also be responsible for your own and your colleague’s health and safety, pro-actively reporting any concerns, near-misses or accidents. |
| 1. **Communication** | As a Technical Specialist in the organisation, you will be involved in demonstrating by example some of the policies, practices and values that are emerging from within the business and will be required to explain and champion these, and others, to effective implementation.  Through your expert knowledge, you will provide advice and guidance to both internal and external stakeholders on technology implementation, opportunities and risks, as well as impacts of decisions on people and businesses.  You will lead customer and internal partner liaison in collaborative projects to ensure overall project delivery and direction, able to lead technical liaison with customers during project delivery, and have demonstrable commercial awareness.  As a Technical Specialist in the organisation, you may be required to contribute to negotiations with external parties in a constructive way, promoting MTC’s perspective, whilst being cognisant and receptive to others’ views.  You will have the ability to be firm or assertive when appropriate, using radical candour where required.  The role also requires you to practice active listening and demonstrate the ability to use data to support recommended actions.  You must be able to communicate to all levels of the business in a professional and courteous manner ensuring that all parts of the business run as one MTC to deliver corporate objectives.  You will be able to demonstrate the use of coaching and mentoring to support colleagues and transfer knowledge in area of expertise to others, within own department and wider MTC colleagues, proactive in Support training and development of team members.  It is key that any individual at this level can communicate a consistent message to colleagues and the wider business such that the drivers, achievements and constraints of the business are understood equally by all. Being able to demonstrate an excellent standard of verbal and written communication skills is necessary. |
| 1. **Innovation** | You will be expected to lead the generation of key project and strategic initiatives in alignment with technology theme's strategy, actively supporting to develop the technology theme business and technology strategy in a specific area of expertise.  You will be expected to understand, contribute to or help define the forward business and technology strategies for the technology theme and participate or lead corporate initiatives as required.  The role requires you to work collaboratively with Senior Managers and Managers from other key functions (Business Development, Programmes, Product Development, Technology Management, and Resource Management) to understand and shape current and future capability requirements and product offerings.  You will take the lead and ownership in proposal of new capability development projects that align with the department, technology theme, and overall MTC strategy, and be able to explore different routes for project funding (internal, industrial, or CR&D funding). You will be expected to lead engagement with existing customers to win repeat business.  You will be required to identify, drive and support continuous improvement in technical aspects of the MTC’s project delivery capability including: behaviours; processes; structures; and tools.  You will be involved with horizon scanning of technologies and novel approaches to solving industrial problems across a range of industrial sectors. |
| 1. **Knowledge** | You will be a degree-calibre engineer, technologist, scientist or mathematician. An educational background, or suitable experience in operational research, business, industrial, logistics, manufacturing, mathematics, statistics, physics, computational science or engineering is preferred.  You must have strong logical reasoning and analytical skills.  You will have a range of team leadership skills along with expert knowledge and experience relating directly to the delivery of this Technology Specialist role. Demonstrate at least 7 years of experience leading simulation, modelling and analytical studies, including one or more of:   * Discrete Event Simulation; * System Dynamics; * Agent Based Modelling; * Mathematical and Statistical Modelling; * Spreadsheet Modelling; * Cost Modelling and Estimation; * Mathematical Programming and Optimisation (linear/non-linear optimisation, constraint programming, heuristic optimisation); * Kinematic modelling, virtual build simulation / virtual validation and commissioning, 3D modelling; * Digital integration such as multi-methods or augmented intelligence.   In addition to you specialist field, you will have a strong understanding of the breadth of Digital Engineering technologies and their respective manufacturing industrial application.  You will have an in depth understanding / appreciation of the challenges in the adoption of digital technologies in respect to modelling and simulation. Expertise in one or more technologies that contributes towards delivery of Digital Engineering’s strategic vision of: virtual manufacturing validation, digitally assisted design, model-based adaptive manufacturing, assisted-human manufacturing, supply chain solutions and circular economy. Demonstrable application of these technologies in a manufacturing business and how they will drive advances in manufacturing and resultant return on investment.  You must have demonstrable evidence of technical leadership on projects, with focus on producing state-of-the-art capabilities, applications and demonstrators involving industrial digital technologies – computer aided engineering, model interoperability, systems integration, virtual factory assurance and validation or cost, business or mathematical modelling.  You must be competent and capable in leading multi-disciplined teams spanning a broad spectrum of modelling and simulation areas and also have wider awareness of other Digital Engineering skillsets (digital inspection, MES, informatics, data analytics, ICT systems and AI).  You will be commercially aware, competent in creating marketing collateral and implementing communication plans.  You will be able to think, plan and execute strategically.  Adept at using Microsoft toolset: Word, PowerPoint & Excel.  It is desirable for you to have previous experience of team leadership and line management and are comfortable with taking on such a role within the department structure. This is to include areas of performance management, people development, conflict management and resolution. You will be expected to work closely with the Resource Management function to enable efficient deployment of your reports across the department portfolio. You will be expected to instil the right professional behaviours and ensure the business culture is followed, acting as a prominent role model. |
| 1. **Person Specification** | **Due to the nature of projects with this role, you should be willing and able to apply for Developed Vetting security clearance by the UK Government, and undertake duties associated with this level of clearance.**  All aspects of the role are to be carried out as an exemplar within the business in adhering to the MTC RIGHT way:   * Acting responsibly, putting MTC’s interests ahead of personal ambition; * Providing inspirational leadership to all who come in contact with you; * Delivering in the broadest sense a great working environment; * Leading with humility, honesty and integrity in all that you do; * Promoting teamwork, supporting through difficult times and collectively celebrating our successes.   Whilst not obligatory, there is a preference that you are willing and able to apply for Developed Vetting security clearance by the UK Government and undertake duties associated with this level of clearance.  In addition, you will offer:  Demonstrable substantial and recognised expertise in a specific area relevant to the theme, probably as a chartered engineer or scientist and Fellow of an appropriate institution. Expert knowledge of the manufacturing sector and deep understanding of manufacturing systems and technologies;  Committed to work collaboratively and network effectively, able to recognise the contribution of others and teamwork with a one MTC mind-set;  Pragmatic hands-on experience, providing problem solving approach and who is willing to physically participate in completion of work when required;  Self-motivated and a self-starter, with the ability to work autonomously to meet deadlines, budgets and quality expectations, both within a team, or independently;  A range of experience in leadership and management in a research and development environment, empathetic to the motivations of engineers and a culturally diverse workforce;  An ability to manage relationships with internal & external stakeholders;  Capability in communicating effectively with colleagues at all levels in the business;  Leadership capability and be resilient and courageous in the face of continuous change and growth, as well as being pro-active in seeing the opportunities that these create for the role you deliver;  A good decision-making capability, demonstrating diligent agility in managing concurrent tasks effectively;  A creative mind-set, able to "think out of the box", identify and resolve issues using a strongly analytical approach and challenge the status quo;  Commitment to work collaboratively and network effectively, able to recognise the contribution of others and teamwork with a one MTC mind-set;  Role model behaviours at all times. |