

Digital Manufacturing Lead (KTP Associate)

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| Department | National Manufacturing Institute Scotland (NMIS) (https://www.nmis.scot/) | | |
| Faculty | Faculty of Engineering (www.strath.ac.uk/engineering/) | | |
| Staff Category | Knowledge Transfer Partnership (KTP) | Reference No | 553089 |
| Reports To | Dr Daniele Marini (Knowledge Base Supervisor); Kenny McKell (Company Supervisor) | Grade: | RS79 |
| Salary Range: | £42 - £47.5k depending on qualifications/experience plus £4,000 training and development budget | Contract Type: | Fixed Term (24 months) |
| FTE | I (35 hours/week) | Closing Date | 08/05/2024 |

Job Advert

The National Manufacturing Institute of Scotland (NMIS) in partnership with Omnitool Limited (<https://www.omnitool.co.uk>) are seeking to appoint a Digital Manufacturing Lead (KTP Associate) in the area of Industrial Digitalization, Manufacturing Strategy Development and Organizational Change Implementation.

Omnitool Limited is a global leader in precision-engineered components. Their commitment lies in adopting the latest technology and processes to meet evolving customer needs. However, their current online programming of machines causes inefficiency and idle production times. They aim to revolutionize this process to reduce downtime and enhance productivity, ensuring they stay ahead of the competition.

The KTP will focus on embedding expertise that will allow us to adopt new digital processes including offline programming; increasing capacity, process monitoring, reducing downtime and upskilling Omnitool. The KTP will develop the skills to control and programme Computer Numerical Control (CNC) machining centres and robotics, as well monitor production and processes at overall company level.

The Associate will be based at the Omnitool site in Irvine, working under the supervision of the Business Partner Supervisor, Kenny McKell, Technical Director. The Associate will be fully integrated within the wider Omnitool team. Supported by Kenny, with further support from the Senior Business Employee, Mark McKell, Operations Director, the Associate will also have access to all staff and company resources as required to ensure successful knowledge exchange.

To be considered for this role, the ideal candidate should possess a solid educational background in the field of production and manufacturing, preferably in a CNC machining environment, demonstrating expertise or exposure in industrial processes, digital production, and computer-aided design (CAD). The ability to effectively apply this knowledge to real-world scenarios is an essential part of the project. A genuine passion for driving the implementation of digital solutions and a deep understanding of management and digitalization strategy are key attributes we seek in the successful candidate.

Moreover, we value individuals who display exceptional communication skills, enabling them to collaborate effectively with various teams within the organization and bridge the gap between technical aspects and business objectives. The candidate's strong problem-solving abilities will play a pivotal role in converting numerical and optimization theory into practical procedures and successful trials.

Furthermore, proficiency in digital literacy is crucial for navigating modern technological advancements. While experience in programming and Computer Integrated Manufacturing is desirable, a candidate's adaptability and willingness to learn new technologies are equally important.

This strategic appointment offers potential growth opportunities within the company as the future Head of Digital Manufacturing and Transformation.

The position offers the KTP Associate the following benefits:

- A challenging and rewarding job, with real responsibility within the work environment
- A planned program of training courses, including a £4,000 personal development budget
- Mentoring from industrial and academic supervisors
- Support and resources from the University
- The chance to implement strategic development within an innovative company
- Fast track your career
- Own your own project, delivering positive change
- Take on a role that bridges academia and business
- The chance to manage a challenging, real-world project

The project is part of the Knowledge Transfer Partnership (KTP) programme that aims to help businesses to innovate and grow by working with UK universities. Successful Knowledge Transfer Partnership projects are funded by UK Research and Innovation through Innovate UK and are part of the government's Industrial Strategy. To find out how KTP works and the vital role you will play if you successfully secure a KTP Associate position please visit: www.ktpws.org.uk

Job Description

Brief Outline of Job:

The Associate will be expected to work at Omnitoool's premises in Irvine, but will be employed by and have access to facilities at the University of Strathclyde. Working under the supervision of the Technical Director the Associate will be required to work in a multi-disciplinary technical area demonstrating experience in industrial processes, digital production, and computer-aided design (CAD) and will focus on embedding expertise that will allow us to adopt new digital processes including offline programming; increasing capacity, process monitoring, reducing downtime and upskilling Omnitoool. The KTP will develop the skills to control and programme Computer Numerical Control (CNC) machining centres and robotics, as well monitor production and processes at overall company level.

Main Activities/Responsibilities:

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| 1. | Developing tools, methodologies, and strategies to facilitate offline machining programming and implementation, digital process monitoring |
| 2. | Develop a digitalization plan to translate digital twinning into production by creating a reliable digital twin of the process and educating technicians and engineers about its benefits. |
| 3. | Conducting workshops and presenting strategic options to address digitalization challenges. |
| 4. | Converting data-driven approaches and optimization strategies into practical procedures and trials to improve process efficiency. |
| 5. | Scaling up digitalization from trial to production, ensuring replicability and quality performances. |
| 6. | Addressing quality, efficiency, and productivity challenges by setting and quantifying production targets. |
| 7. | Understanding customer demands and translating them into operational objectives. |
| 8. | Mapping, managing, and understanding organizational changes through a comprehensive view of the company's value chain and value stream. |
| 9. | Assisting the company in positioning itself in the market to achieve higher agility and expand its market segment |
| 10. | Formalizing implementation strategies, production, and optimization protocols to drive successful outcomes. |

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

- E1 Master's degree in a discipline related to production and manufacturing, such as Mechanical, Management, Industrial, or Manufacturing Engineering
- E2 Computed Aided Design (CAD): understanding of mechanical drawing and engineering design are mandatory skills to be considered for this role
- D1 Membership of relevant Chartered/professional bodies (for example Higher Education Academy)

Experience

- E3 Experience or exposure to manufacturing process and industrial production systems, including digital production are essential.
- E4 Exposure and passion for implementation of digital solutions, critical decision making, and exposure to management and digitalisation strategy
- E5 Digital Literacy in an Industrial environment: exposure to tools for Industrial Data analysis, including methodologies for production monitoring and driving decision making.
- D2 Exposure to Computer Integrate Manufacturing (CIM) technologies and CAM programming
- D3 Proficiency in programming languages, such as Python or MATLAB

Job Related Skills and Achievements

- E6 Experience or exposure to manufacturing and industrial environment
- E7 Experience or exposure to machining processes and metal manufacturing
- D4 Successfully led or contributed to projects that resulted in significant cost savings and improved production efficiency through digitalization and optimization efforts.
- D5 Proven track record in offline programming of CNC machine tools and process optimization, with successful application of quantitative optimization techniques.
- D6 Map, manage, understand organizational change through analytical tools (such as Value Stream Mapping)
- D7 Project management skills to oversee the development and execution of workshops and strategic options.

Personal Attributes

- E8 Willingness to grow within the company as the prospective Head of Digital Manufacturing and Transformation
- E9 A collaborative mindset to work effectively as part of a diverse team of researchers, technicians, and experts, fostering a cooperative and inclusive work environment
- E10 Taking the initiative to lead projects and demonstrate ownership over tasks
- E11 Strong communication attitude, including verbal and written communication skills to effectively interact with stakeholders at various levels

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Informal enquiries about the post can be directed to Dr Daniele Marini, Anchoring Innovation Manager (0141 534 5561 / daniele.marini@strath.ac.uk).

Conditions of Employment

Conditions of employment relating to the KTP Associate staff category can be found at: [Conditions of Employment](#).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

Probation

Where applicable, the successful applicant will be required to serve a 6 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, and disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.

