



# Product & System Development Theme Lead

Department	National Manufacturing Institute Scotland (NMIS) ( <a href="http://www.nmis.scot/">www.nmis.scot/</a> )		
Faculty	Faculty of Engineering ( <a href="http://www.strath.ac.uk/engineering/">www.strath.ac.uk/engineering/</a> )		
Staff Category	Knowledge Exchange	Reference No	686301
Reports To	Team Lead: Design Engineering	Grade	8
Salary Range	£46485 - £56921	Contract Type	Open Contract
FTE	1 (35 hours/week)	Closing Date	18/02/2025
Working Arrangements	Hybrid. The standard requirement across the University is that at least three days per week (based on IFTE) will be spent working on-site (with flexibility as appropriate).	On Site Facilities	Car parking, on-site shower facilities, reflection room.
Holidays	31 days + 11 statutory days Option to purchase additional holidays.		
Pensions	Contributory pension scheme available to all staff including generous employer contribution.		
Training	Professional Development with <a href="#">Organisational and Staff Development Unit</a> (OSDU) plus external training if required.		
Family Friendly Benefits	Generous parental leave provision, on-campus nursery and options for flexible working.		
Health and Wellbeing	University Sport centre, Occupational Health service, access to health and wellbeing events, cycle to work scheme, Employee Assistance Programme, agile working and established carers support network and carer friendly policies.		

## Job Advert

The University of Strathclyde is a leading international technological institution and has a long history of working with industry to deliver strong business growth from access to research and innovation expertise. The latest major initiative continuing to deliver on this track record is through the National Manufacturing Institute Scotland (NMIS).

As a magnet for innovation in advanced manufacturing, the National Manufacturing Institute Scotland (NMIS) group of specialist R&D centres, supports manufacturing, engineering and associated tech businesses of all sizes, to thrive domestically and internationally through accelerating productivity, embracing new digital technologies and achieving net-zero targets.

We turn smart ideas into reality and deliver ground-breaking research.

Coming from diverse backgrounds and disciplines, our passionate team works alongside industry, academia, and the public sector to solve problems, train the workforce of the future and generate the creative ideas that will transform manufacturing.

Ultimately, we are growing the economy, developing a vibrant and skilled talent pool and helping create prosperous, sustainable communities.

The NMIS Digital Factory's Design Engineering Team is seeking to appoint an experienced and enthusiastic Product & System Development Theme Lead/KE Fellow, to lead and manage delivery of high value research and knowledge exchange programmes, the improvement of applied product and systems engineering with respect to the development of manufactured goods, through applied experimental research activity, and introduce the outcomes into manufacturing environments. This will involve the candidate anticipating the direction of design and manufacturing capability to develop a credible technical roadmap and research strategy and deliver industrial research projects.

The Product & System Development Theme Lead will also lead, manage and develop the Product & System Development Theme's team with the aim of building a world-leading community of product and systems development experts in Strathclyde. The post holder will be expected to work between NMIS and its industrial partners and there will be a strong emphasis on knowledge exchange and process improvement.

To achieve the above the Product & System Development Theme Lead will require significant research and/or industrial experience in at least two of the following technical areas:

- Knowledge and experience of an industrial design and manufacturing environment including the various kinds of manufacturing equipment and technologies common across industry
- Good understanding of the engineering design process including gated design reviews to diligently de-risk component, product and system designs.
- A broad knowledge of verification and validation activities to mature the technology readiness of product and system designs.
- Knowledge of digital tools available to support component, product and system designs including CAD, PDM, PLM, FEA etc.
- Good understanding of how design data is used in R&D, product development and through the life of a product or system.
- Good understanding of mechanical design and optimisation of components to withstand identified loads and stresses.

An awareness of more than one area of NMIS design engineering capability is desirable for the role.

The post holder will require the knowledge, skills and experience normally associated with a first degree and PhD for example in mechanical/materials engineering or design engineering. We are also interested in candidates with equivalent industrial experience. The post holder will have an established track record in leading the delivery of engineering solutions in an industrial context, as well as experience of taking a leading role in research and development of manufacturing processes.

The post holder will have the ability to work autonomously, to plan and prioritise their own workload with minimal inputs from higher management, and deal with complex problems presented to them by colleagues. The post holder will also need experience of project planning and delivery, as well as excellent communication and interpersonal skills, with a proven ability to interact with a range of stakeholders from industry and academia. The post holder will be required to make a significant contribution to the administrative activities of NMIS including membership/chair of relevant committees. As part of the role involves managing staff members within the theme, the post holder will have the ability to line manage and lead a team, including undertaking capability development, recruitment activities, allocating work, managing outputs and performance management.

## Job Description

### Brief Outline of Job:

With minimal guidance from the NMIS Design Engineering Team Lead, the Product & System Development Theme Lead will lead, manage and develop Manufacturing Engineers, Design Engineers, research, and other staff, with the aim of building a world-leading community of product and system development experts in Strathclyde. Build a credible research direction through appropriate technology road-mapping techniques and deliver a portfolio of industry-based knowledge exchange and development projects, which will be delivered predominantly by working closely with NMIS staff, industrial partners and colleagues across the wider University and through strategic alliances with other institutions.

The post holder will be responsible for ensuring the successful delivery of a range of direct and CR&D funded projects, to pursue and establish high quality knowledge exchange programmes, including securing research funding and contracts; to lead or support research programmes to ensure delivery of associated objectives; to engage as appropriate in relevant research activities; and to carry out administrative tasks assigned by the Digital Factory Director through the Team Lead.

Duties will include: technology road-mapping and direction setting; line management of staff members of the Product & System Development Theme, including capability development, supporting recruitment with the Team Lead, and tasking, training and target-setting; technical consultancy, including acting as a point of contact for customer enquiries and developing/costing of work proposals; and project delivery.

## Main Activities/Responsibilities:

1.	Lead on the research and development of new and innovative Product & Systems Development activities for manufactured goods, undertake/lead development activities; applying knowledge of engineering design and associated methodologies and technologies to manufactured goods; liaising with NMIS industrial partners to implement optimisation strategies and problem solving into their processes.
2.	Lead individual and/or collaborative engineering research or knowledge exchange activities to determine appropriate product / system development strategies for different industrial applications and contribute to the development of new research areas around product / system development for industrial and commercial applications.
3.	Identify new approaches/techniques or technologies and ensure that any IP generated is recognised and managed appropriately.
4.	Provide expert guidance to research teams in area of product and system development (i.e. design methods, product development processes, costing, sustainable design) to ensure practical, robust and impactful solutions are developed in response to research challenges.
5.	Enhance the NMIS digital manufacturing capability by anticipating future technical requirements and research needs and providing direction on state-of-the-art product and system development approaches, including advancing cost modelling capability, sustainable design thinking and optimisation of the product and system development service offering.
6.	Line manage staff members of the Product & System Development technology theme, providing direction, support and guidance. Ensure capability development, support recruitment activities with the Team Lead, allocate work, manage outputs and performance manage, as required.
7.	Responsible for developing relationships in support of product and system development, including NMIS member companies, to maintain positive working relationships and partnerships and the development of collaborative project opportunities.
8.	Respond to industrial enquiries for assistance in support of challenges and preparation of statements of work, quotations and funding applications.
9.	Lead larger project teams to deliver against specific requirements of research and knowledge exchange programmes.
10.	Plan and manage workload, with minimal guidance from NMIS Team Lead. Provide leadership by coordinating the work of others to ensure delivery of programmes.
11.	Identify opportunities for strategic development of new projects by building contacts internally and externally, participating in networks for the exchange of information, and by forming relationships with customers, suppliers and colleagues for future collaboration. Identify and initiate substantial funding opportunities (commercial and CR&D) in the relevant technology area and develop consortia around funding opportunities.
12.	Write up reports, individually or in collaboration with colleagues, for external organisations, and further write up findings for additional dissemination (e.g. professional publications or peer review journal publication) as appropriate.
13.	Assist in the training and development of staff and external clients in manufacturing engineering methods and processes.
14.	Influence decision making amongst colleagues with respect to academic/engineering content as part of collaborative activities particularly relating to own areas of expertise.
15.	Contribute to the overall NMIS growth by working as an integral part of the NMIS team effort, inputting to the research programme and capability development, as necessary, to meet strategic objectives.
16.	Contribute to and play an active role in the growth and development of the Theme Lead Community, sharing good practice and expertise, and supporting colleagues through shared experience. Ensuring awareness and collaboration with other Design Engineering, Digital Factory and broader NMIS Technology Themes.
17.	Engage in continuous professional development.

## Person Specification

<b>Educational and/or Professional Qualifications</b> (E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)	<b>Essential/ Desirable</b>	<b>Assessment Method</b>
E1 Good first degree (minimum class 2:1) and PhD (or equivalent significant professional experience in a relevant industry setting) in a relevant engineering discipline, e.g. mechanical engineering, materials or manufacturing.	Essential	Application/CV
D1 Incorporated / Chartered Engineer/Scientist, Member of professional body in an appropriate discipline	Desirable	Application/CV
<b>Experience</b>		
E2 Significant knowledge of product and system development from an engineering design perspective including the use of design thinking and systems thinking.	Essential	App/CV/ Interview
E3 Knowledge and experience of different types of manufacturing equipment and associated design considerations.	Essential	App/CV/ Interview
E4 Good knowledge and understanding associated with the design of high integrity or highly complex products and systems including the use of well-defined processes and best practices.	Essential	App/CV/ Interview
E5 Experience in leading and taking technical ownership of specific areas to research independently and manage the work of teams	Essential	Interview
E6 Experience of high integrity engineering design in a research or industrial context	Essential	Interview
E7 Demonstrable track record in developing and delivering high quality proposals and playing a leading role in attracting funding for project initiatives (internally/externally)	Essential	Interview
E8 Significant knowledge and skills to be able to establish and maintain a network of relevant contacts, and ensure credibility within external partnerships	Essential	Application/CV
E9 Significant experience and track record in defining and implementing product and system development techniques including the use of appropriate industrial digital technologies	Essential	Interview
D2 Knowledge and experience associated with collaboration with third party suppliers (i.e. vendors, test houses etc) in the context of product and system development.	Desirable	Application/CV
<b>Job Related Skills and Achievements</b>		
E10 Significant professional experience of problem solving and addressing product and system development challenges within an academic or industrial enterprise	Essential	Interview
E11 Ability to plan and organise own workload effectively with general supervision from senior colleagues.	Essential	Interview
E12 Ability to develop, plan and organise projects or programmes across a range of settings whether research or industrial. With ability to build working teams with KE, Professional, Research and Academic staff as appropriate.	Essential	Interview
D3 Experience of multi/inter-disciplinary knowledge exchange and research	Desirable	Interview
<b>Personal Attributes</b>		
E13 Excellent written and verbal communication skills, with an ability to interact with a range of stakeholders in both industry and academia.	Essential	App/CV/ Interview
E14 Ability to influence stakeholders, internally and externally, at varying levels and ability to convey compelling arguments with complex technical information.	Essential	App/CV/ Interview
E15 Demonstrable ability to line manage and lead a team, including undertaking capability development, recruitment activities, allocating work, managing outputs and performance management, as required	Essential	Application/CV
E16 Experience of disseminating results and contributing to research and commercial proposals	Essential	App/CV/ Interview
E17 An ability to work as part of a team, through participation in collaborative projects	Essential	App/CV/ Interview
E18 Ability to develop new areas and manage associated ambiguity as new research themes emerge	Essential	Interview

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## Other Relevant Factors

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E19 An ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences	Essential	Interview
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## Application Procedure

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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

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

Informal enquiries about the post can be directed to Graeme McLaughlin, Team Lead: Design Engineering ([graeme.t.mclaughlin@strath.ac.uk](mailto:graeme.t.mclaughlin@strath.ac.uk)).

### Conditions of Employment

Conditions of employment relating to the Knowledge Exchange 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](#).

### Pre-employment health screening

An offer of appointment will be subject to a medical assessment by Occupational Health. An individual who accepts an offer of employment must complete a confidential medical questionnaire and forward it to the Occupational Health Nurse within 5 days of receipt. If further information is required the individual may be contacted by the OHN or a Medical Advisor and a personal appointment with the individual may be arranged. An unconditional contract of employment will not be issued until Human Resources receives confirmation that applicant is fit to undertake the duties of the post.

### Probation

Where applicable, the successful applicant will be required to serve a 12 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.



# Conditions of Employment

## Knowledge Exchange Staff

### 1. GENERAL CONDITIONS

Members of staff are subject to the Charter and Statutes and the Ordinances and Regulations of the University, published in the Calendar, and to any amendments or additions thereto approved by the University Court and, in the case of the Charter and Statutes, the Privy Council. Staff are also expected to familiarise themselves with, and adhere to, general University policies and procedures, as published on University web pages.

The University Court recognises Strathclyde Universities and College Union (SUCU) as the sole body with which it will negotiate and consult on all collective issues concerned with the terms and conditions of employment of Knowledge Exchange Staff. Such terms and conditions may be varied by the University Court after negotiation and consultation with SUCU.

Each member of staff is responsible for the proper performance of allocated duties to the person or persons specified in the member of staff's letter of appointment and any accompanying papers.

The University is committed to ensuring that its business is conducted in an open and transparent manner and will take all appropriate steps to address risks of bribery or corruption. Members of staff are required at all times to act honestly and with integrity and to safeguard the resources for which they are responsible. The University has in place a robust Public Interest Disclosure (Whistleblowing) Policy to enable concerns to be brought to its attention. This is available at [www.strath.ac.uk/publicinterestdisclosure](http://www.strath.ac.uk/publicinterestdisclosure). Other relevant policies, e.g. Fraud Prevention and Conflicts of Interests, can also be found on the University's website.

Any member of staff may at any time be exposed to commercially sensitive information, information related to potentially valuable intellectual property or information which may otherwise be of a confidential nature. This information, which could be found anywhere in the University, may be written or disclosed orally, can include information of a commercial or technical nature, and may be owned by the University or by third parties. The University requires all employees to keep any such information confidential in the first instance and not disclose, publish or otherwise disseminate it without prior consent of the University. Such confidentiality obligations are commonplace and in the commercial interests of the University. When in doubt advice should always be sought from Research and Knowledge Exchange Services prior to disclosure.

The University operates probationary periods for new staff, the duration of which will be specified in individual letters of appointment. The normal probation period for posts in this staff category is 9 months for those at grades 6 and 7, and 12 months for grades 8 and above. Further guidance on probationary procedures is published at <http://www.strath.ac.uk/staff/policies/hr/>.

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Further information on the terms and conditions specified in this document and other staffing policies and procedures can also be found at [www.strath.ac.uk/hr](http://www.strath.ac.uk/hr).

### 2. SALARY

Appointments are made at an appropriate salary point on the University's grading structure, with initial placing determined according to qualifications and experience. Increments are paid to staff on the 12 month anniversary of their appointment. Where this is not the first of the month, the increment will be paid on the first of the month directly

after the 12 month anniversary. This allows 1 progression to the next point on the salary scale until the top guaranteed point of the scale is reached.

Salaries are paid directly to staff members nominated bank account, normally on the second last working day of the month.

### 3. HOURS OF WORK

Working time is that required to fulfil the duties of the post. The University Court recognises that Knowledge Exchange staff carry out their duties in a variety of ways appropriate to the nature of their role, but expects work to generally be performed during normal working hours on week days. There are exceptions to this pattern which may involve contact at other locations or in the evenings, or at weekends, but these arrangements will be made with the agreement of the member of staff concerned.

Duties may, by arrangement with Head of Department/School/Director, include some teaching associated with the post (up to a maximum of 40 hours per semester) for which no additional payment will be made.

Additional work which does not fall within the scope of that described above may by arrangement attract payment which must be authorised and processed through the payroll.

### 4. HOLIDAYS

Annual leave entitlement is 31 days per year to be taken by agreement with the line manager. For staff members working on a part-time basis, holidays will be calculated on a pro-rata basis.

In addition to annual leave there is an entitlement to eleven public holidays per year which should be taken on days that the University is closed for this purpose. The University presently closes for four additional days over the Christmas and New Year period. **These additional days count against the annual leave entitlement.**

For staff members working on a part-time basis, public holiday entitlement will be calculated on a pro-rata basis.

Annual leave and public holiday entitlements should be taken in the leave year to which they relate. Up to five days leave can be carried forward into the new leave year subject to line management agreement. In exceptional circumstances, Heads of Department/School/Director may approve carry forward of accrued annual leave in excess of five days.

The University's expectation is that staff take all accrued holidays prior to their termination date. If staff have exceeded their entitlement the University will deduct an equivalent number of days pay from final salary payments.

## 5. SICKNESS ABSENCE

During any period of absence through illness or injury provided the appropriate notification and certification procedures have been followed the University will pay a member of staff (having taken account of the aggregate of all periods of absence due to illness during the twelve months immediately preceding the first day of the current absence) as follows:

<b>Period of Continuous Employment at start of absence from work</b>	<b>Full Pay</b>	<b>Half Pay</b>
Less than 1 year	1 month	1 month
1 year but less than 2 years	2 months	2 months
2 years but less than 3 years	4 months	4 months
3 years but less than 5 years	5 months	5 months
5 years or more	6 months	6 months

In order to manage the University's sick pay scheme the University requires to maintain sickness absence records on individual members of staff. When making payments after the expiry of statutory sick pay the University will deduct an amount equivalent to any benefit normally payable by the Department of Work and Pensions. For full details on the general University policy in this area please refer to the Sickness Absence Management Policy at [www.strath.ac.uk/staff/policies/hr](http://www.strath.ac.uk/staff/policies/hr).

## 6. PENSIONS

If you are under age 75 at the date your appointment commences you will automatically become a member of the pension scheme operated by the University — the Universities Superannuation Scheme (USS). You will be admitted to the career revalued benefits scheme called the USS Retirement Income Builder; the contribution rate that currently applies is 6.1% of pensionable salary. A threshold applies to the maximum salary that counts towards the USS Retirement Income Builder. The current threshold from 1 April 2024 is £70,296 per year. Contributions based on salary above the monthly equivalent rate of the threshold are paid to the defined contribution section of the scheme called the USS Investment Builder. Please use the following link to access information, including the USS Member Guide: <https://www.uss.co.uk/for-members/youre-a-new-joiner>. The scheme booklet is called 'Your Guide to the Universities Superannuation Scheme'.

The University operates a salary exchange arrangement, Pensions Plus, for members of the USS. Pensions Plus enables pension contributions to be made in a manner so that both employees and the University can benefit from available National Insurance Contribution savings. You will be automatically included in Pensions Plus, provided it does not adversely affect your take-home pay or your ability to claim certain state benefits. If your earnings fall below the Pension Plus pay protection limit you will be opted out of Pension Plus. This will not affect your membership of the USS.

New members of staff may opt out of USS within three months of taking up appointment and will then be treated as if they had never been a member of the scheme. After three months members of staff who wish to withdraw from USS during their employment will be required to give a minimum of 28 days' notice in writing to the University. Any member of staff who wishes to opt out should contact the Pensions Section, Finance, in the first instance ([pensions@strath.ac.uk](mailto:pensions@strath.ac.uk)). Please note that if you are a member of Pensions Plus and withdraw from USS with less than two years of membership, or cease employment with the University and have less than two years of USS membership, the option of a refund of pension contributions will not be available to you. Instead, USS must provide you with a pension benefit that is payable from your Normal Pension Age. Regardless of whether you participate in Pensions Plus, if you are a member of the pension scheme for two years or more you are not entitled to a refund of pension contributions on leaving the scheme, you will be entitled to a pension benefit.

The University reserves the right to alter or withdraw Pensions Plus as it sees fit or as required to comply with legislative changes. Withdrawal or amendment of Pensions Plus will not affect your membership of USS. If you do not wish to participate in Pensions Plus but wish to remain in

the pension scheme please contact the Pensions Team who will provide you with a non-participation form.

Information regarding pension scheme membership can be found on the Pensions pages of the University's website. Full information regarding USS can be found on the USS website – [www.uss.co.uk](http://www.uss.co.uk)

## 7. PLACE OF WORK AND RESIDENCE

Members of staff will be based on the John Anderson Campus, unless otherwise stated in the letter of appointment. The Department/School in which the post is initially placed will be specified in the letter of appointment although there will be an expectation to work at such other places as required in the course of employment.

If the need arises for members of staff to work outside the UK for a period (or periods) of more than one month then such arrangements will be subject to mutual agreement. Members of staff would then be provided with a statement in advance setting out the terms covering such periods of employment.

The University does not normally place specific restrictions upon the place of residence of members of staff. All staff are, however, expected to reside in a location which is compatible with the satisfactory fulfilment of all the duties associated with their appointment.

## 8. CONSULTANCY/FURTHER ACTIVITIES

To support the strategic objectives of the University and to facilitate individual professional development, the University encourages staff to engage in professional activities with outside bodies related to their field of work. In many cases, such activity will be approved on the basis that it represents University knowledge exchange activity and should therefore be treated as part of the individual's overall workload and managed through the University's systems. It is also recognised that there will be some cases where an activity is entirely separate from the University and should thus be notified/approved as a personal business activity. For further information please refer to the "University Procedure in relation to Work for Outside Bodies including Consultancies", which forms part of the employment contract and can be accessed at <http://www.strath.ac.uk/hr>.

## 9. DISCIPLINARY AND GRIEVANCE PROCEDURES

Further information on the University's disciplinary and grievance procedure can also be found at [www.strath.ac.uk/policies/hr](http://www.strath.ac.uk/policies/hr) or on request from Human Resources.

## 10. NOTICE AND TERMINATION

The employment of a member of staff is terminable by at least three months notice in writing, on either side; except during probationary period when the notice period is one month. If notice is being given by a member of staff earlier release may be granted if this can be arranged without detriment to the work of the department or area. If the appointment is for a fixed term it will expire at the end of the period without the necessity for notice. Fixed term contracts may be terminated by either party short of the expiry date by the serving of one months' notice in writing. The University is not obliged to continue a fixed term appointment beyond the employment period.

Revised April 2024