

# NATIONAL MANUFACTURING INSTITUTE SCOTLAND

## INDUSTRY DOCTORATE PROGRAMME IN ADVANCED MANUFACTURING

### APPLICATION GUIDANCE

CALL '4' – AUGUST 2019

## 1. SUMMARY

SRPe invites applications to the National Manufacturing Institute Scotland Industry Doctorate Programme (NMIS-IDP). NMIS is an industry-led international centre of manufacturing expertise which aims to make Scotland and the UK a global leader in advanced manufacturing. Industry, academia and public-sector bodies will work together to transform skills, productivity and innovation in the sector.

Under the NMIS-IDP SRPe is launching a total of thirty NMIS industry doctorates (PhDs) in advanced manufacturing (co-funded by industry and Higher Education partners) between October 2018 and March 2020. The programme is designed specifically around industry needs and will be delivered in close collaboration with the NMIS development team and advanced manufacturing industry community involving OEMs, SMEs and other supply-chain partners.

Successful NMIS-IDP projects must be driven by industry demand and will address key areas of manufacturing challenge and skills development from across a wide spectrum of organisations and sectors. A defining characteristic of the NMIS-IDP is that the projects will address industry-driven challenges, with companies as co-investors and engaged directly with the research.

The NMIS-IDP is delivered by SRPe as part of the Manufacturing Skills Academy of the National Manufacturing Institute Scotland. The NMIS-IDP also forms the first phase of the pan-Scottish SRPe Engineering Graduate School in relation to SRPe's Advanced Manufacturing theme.

The industry doctorates will be of up to four years' duration and will address the most critical skills and technical research challenges in advanced / digital manufacturing. Each project must be hosted by a SRPe university and sponsored by at least one industrial company.

This 4<sup>th</sup> call will fund projects commencing between January 2020 and March 2020. Further information on the specifications of this call and how to apply are provided within this document.

**The call has a single-stage application process with deadline 5pm on Friday 18<sup>th</sup> October 2019.**

SRPe aims to inform applicants of the outcome of their applications by 2<sup>nd</sup> December 2019. NMIS-IDP students must be registered by their institution from 1<sup>st</sup> January 2020 and no later than 31<sup>st</sup> March 2020.

Any queries regarding the application process should be directed to Sarah Doherty, SRPe Administrator at [sarah.doherty@srpe.ac.uk](mailto:sarah.doherty@srpe.ac.uk).

## 2. BACKGROUND

### 2.1. Scottish Research Partnership in Engineering (SRPe)

The Scottish Research Partnership in Engineering (SRPe) is the pan-Scottish partnership of ten universities engaged in world-class engineering research working in collaboration with industry and government. SRPe is a community of more than 1,100 academics, 5,500 postgraduate students and 13,500 undergraduate students.



SRPe's overall strategy and collaborative activities are focused around five strategic themes matching national-level strategic priorities and challenges with the key areas of engineering research and innovation strength across the Scottish university pool. The strategic themes and priorities are driven by the potential for socio-economic impact based on industry needs, national-level economic growth potential and challenges for society today and in the future. The themes are strongly horizontally integrated providing the robust cross / multi-disciplinary innovative research-driven solutions required to address the complex industrial and societal challenges of the 21st century.

Advanced Manufacturing is a key strategic theme for SRPe. As manufacturing becomes increasingly advanced and enters the age of digitalisation, Scotland is extremely well-positioned to produce major socio-economic benefits associated with the digitalisation of manufacturing and innovations across its underpinning technologies.

### 2.2. National Manufacturing Institute Scotland (NMIS)

The National Manufacturing Institute Scotland (NMIS) will be an industry-led international centre of manufacturing expertise where research, industry and the public sector work together to transform skills, productivity and innovation to attract investment and make Scotland a global leader in advanced manufacturing.

The NMIS-IDP will be delivered by SRPe and will be an integral part of the Manufacturing Skills Academy of NMIS. NMIS' focus on digital manufacturing, automation and skills (via its Manufacturing Skills Academy) will bring benefits across multiple sectors. Industrial manufacturing businesses in aerospace, engineering, automotive, renewables and shipbuilding will particularly benefit, but NMIS will also support businesses in sectors such as oil and gas, nuclear, chemicals, medical and life sciences, and food and drink, etc.

### 3. CALL FOR APPLICATIONS

SRPe invites applications to the NMIS Industry Doctorate Programme (NMIS-IDP) for projects that support the Scottish Government's aim to make Scotland a global leader in advanced manufacturing.

Successful projects must be driven by industry demand and will address key areas of manufacturing challenge and skills development from across a wide spectrum of organisations and sectors.

A defining characteristic of the NMIS-IDP is that the projects will address industry-driven challenges, with companies as co-investors and engaged directly with the research.

The industry doctorates will be of up to four years' duration. Each project must be hosted by a SRPe university and sponsored by at least one industrial company.

The NMIS-IDP will provide funding towards the fees and stipend at 50% (up to a maximum of £40K over four years) with the University / Industry Sponsor providing the remaining 50%, with the minimum threshold for Industry funding set at 40%. All additional project costs are to be provided by the University / Industry Sponsor.

Projects under this call are due to commence between 1<sup>st</sup> January 2020 and 31<sup>st</sup> March 2020.

#### 3.1. Specifications and Funding Overview

The NMIS-IDP awards are competitive, and applications will be assessed based on their ability to clearly demonstrate industry-driven needs in addition to quality, impact and strategic alignment with the overall objectives of the Scottish Government 'Manufacturing Action Plan (MAP): A Manufacturing Future for Scotland'.

The doctorates will be up to four years' duration.

**The NMIS-IDP will provide fees and stipend of up to £10K and £30K respectively.** This represents matched (50%) funding over the four-year doctorate of the average Home / EU rate fees (total £20K) and stipend (total £60K).

The expected distribution of fees and stipend is shown below:

- NMIS-IDP 50% (capped at up to £10K fees and £30K stipend)
- Industry Sponsor 40% (minimum threshold)
- University 10% (maximum)

Note there is a **minimum threshold for Industry Sponsor contributions of 40%** as shown above.

Industry Sponsor contributions in excess of 40% (up to the maximum of 100%) are to be encouraged where appropriate. This flexibility is built in to reflect that there may be a range of different IP requirements across the programme depending on Industry Sponsor needs.

### 3.2. Eligibility Criteria

For an application / project to be eligible for NMIS-IDP funding, it must meet the following criteria:

- The project must be hosted by a SRPe university.
- The project must be based on an industry-driven need and must focus on innovation in, or application of, advanced / digital manufacturing and / or its underpinning technologies.
- There must be at least one academic supervisor (Lead Academic Supervisor), and one Industrial Supervisor. We welcome applications with a 2<sup>nd</sup> / Co-Supervisor based in another UK university.
- A letter of support from the Industry Sponsor, confirming their financial commitment (cost contribution), must be included with the application.
- There is a minimum threshold for Industry Sponsor contributions of 40% (fees and stipend at Home / EU Rates).
- The application must include a clear breakdown of all costs associated with delivering the project (including in-kind contributions from Industry Sponsor and other external sources), and how the non-SRPe contribution is to be split between the academic institution and industry sponsor.
- For international students to be eligible for the programme, the applicant must be able to evidence funding to cover the shortfall between home / EU and international fees.
- The NMIS-IDP **is not limited to** Industry Sponsors based in Scotland.
- Previous applicants to the NMIS-IDP (successful or unsuccessful) are welcome to submit applications to this call.

- Applicants must ensure they have received sign-off by an authorised signatory from their institution (e.g. by Head of School or Dean of Research).

### 3.3. Assessment Criteria

Applications to the NMIS-IDP will be assessed against the following criteria:

#### **STRATEGIC ALIGNMENT**

- Alignment with the Scottish & UK Governments' manufacturing vision and strategy
- Evidence of strategic gap / industry-driven priority demand
- Added value / industry driven need for industry-academic collaboration with clear industry commitment

#### **QUALITY**

- Quality of the research environment for delivery of the project and supervision of the student
- Level of innovation and technical challenge
- Project objectives, outcomes, deliverables with clear methodology, work plan and timescales

#### **IMPACT & BENEFITS**

- Impacts and benefits (industry sectors, effect on the supply chain)
- Route to impact
- Potential for longer-term collaborative relationships / activities

## 4. APPLICATION PROCESS

To submit an application please complete the NMIS-IDP Application Form released with this call following the guidance contained within this document.

When completing the application form please **do not exceed the maximum number of words** in each section.

Please note that applications must be accompanied by a letter of support from the Industry Sponsor(s), confirming their financial commitment (cost contribution) to the project, along with the student's CV and copies of academic qualifications (if the student has already been identified).

Completed application forms should be emailed, along with supporting documentation to Sarah Doherty, SRPe Administrator ([sarah.doherty@srpe.ac.uk](mailto:sarah.doherty@srpe.ac.uk)) by **5pm on Friday 18<sup>th</sup> October 2019**. Applications received after this deadline will not be eligible.

**Applicants must ensure they have received institutional sign-off by an authorised signatory** (i.e. by Head of School or Dean of Research) before they submit an application (Section 8 of the Application Form: Applicant Signature & Institutional Approval).

When preparing your application, please note the following points against each section of the application form:

### SECTION 1 – MAIN APPLICANT DETAILS

The Main Applicant must be the Lead Academic Supervisor, and the key contact for the application process. Please include full details of the home institution, department, school or college, along with job title and full contact details.

### SECTION 2 – PROJECT DETAILS

The project title is required, along with confirmation that the project duration will be four years. If the project duration will not be four years a statement must be provided explaining proposed project duration and the reason for this.

The project description should include details on the scope and rationale for the project including information aligned with the Assessment Criteria described in Section 3.3 of these guidelines.

Details on the access to outputs and intellectual property should be provided as described in Section 5 of these guidelines.

A Project Summary / Abstract should be provided in 300 words or less, describing the project including details of the academics and industrial partners involved, the business / industry / technical challenge the project will address and the intended outcomes and impact of the project.

**Note should be taken that, in the event that the application is successful, this abstract will be published in the public domain for reporting and publicity purposes.**

### SECTION 3 – INDUSTRY SPONSOR

The Industry Sponsor (company) and the name / contact details of the Key Contact should be provided. Note that this could be different from the Industrial Supervisor.

For applications to be eligible, the funding from the Industry Sponsor must be confirmed, along with a Letter of Support, including a statement on the cost contribution from the company.

A summary should be provided on the Industry Sponsor's sectors of business operation key objectives; main range of products and / or services and details of any operational base in Scotland / UK (existing or planned).

The number of employees in the company should be stated.

Any existing relationship between the University and Industry Sponsor should be described.

A summary should be provided on the specific facilities, if any, that the Industry Sponsor will make available to the student during delivery of the project.

### SECTION 4 - SUPERVISION

In addition to the Lead Academic Supervisor (Main Applicant) full details should be provided on the Academic 2<sup>nd</sup> / Co-Supervisor, the Industrial Supervisor and the how the supervisory team will manage the project.

This should include details on the arrangements for the student supervision; details on the experience of the supervisory team; outline of the mentoring available to the student and PhD training offered by the host academic institution.

Details on the project management arrangements should be provided, for example, information on how often meetings will take place between the academic, industrial supervisors and the student.

Project risks and the proposed mitigations should be detailed (e.g. timely access to equipment and materials) to ensure the project and the supervision of the student is not disrupted over the course of the industry doctorate.

## SECTION 5 - STUDENT

NMIS-IDP projects under this call will be awarded to successful applicants in December 2019. Projects will ideally commence (following student registration) in January 2020, however projects with start dates between 1<sup>st</sup> January 2020 and 31<sup>st</sup> March 2020 (to allow for student recruitment) will be acceptable. Further extensions may be considered by SRPe based on a formal request by the applicant.

Within the Application Form, assuming the student has been identified, the name of the student should be provided and details on student qualifications (undergraduate and postgraduate) with details on where and when obtained.

The student residency status should be confirmed (Home / EU / International). Note that funding is offered at Home / EU Rates only. If the student is International full details should be provided on the additional funding value and source to cover the additional international fees.

If the student has not yet been identified details should be provided on the status of the student recruitment and the intended student and registration / project start date.

As part of the application, where a student has been identified, the student CV and copies of the academic (undergraduate and postgraduate) qualifications should be submitted.

## SECTION 6 - FUNDING

The Applicant should provide a full breakdown of the industry doctorate project budget, including any additional contributions made by the university (Applicant), Industry Sponsor and other external sources. These include 'Project Delivery Costs' and all 'In-kind' contributions.

The Applicant should complete the grey shaded boxes in the financial table in the application form.

### Fees & Stipend

The grey boxes in the table should be completed to reflect the **actual amounts**.

**The NMIS-IDP programme will provide fees and stipend of up to £10K and £30K respectively.** This represents matched (50%) funding over the four-year doctorate of the average Home / EU rate fees (total £20K) and stipend (total £60K).

The expected distribution of fees and stipend is shown below:

NMIS-IDP	50% (capped at up to £10K fees and £30K stipend)
Industry Sponsor	40% (minimum threshold)
University	10% (maximum)

The maximum NMIS-IDP contributions are shown in column '1' of the table. If the total fees charged by the university (over the four-year doctorate) will be less than £20K, then **the values shown in column '1' of the table for fees and stipend should be reduced accordingly**, ensuring they match the totals of columns '2' and '3' of the table.

Note there is a **minimum threshold for Industry Sponsor contributions of 40%** as shown above.

Industry Sponsor contributions in excess of 40% (up to the maximum of 100%) are to be encouraged where appropriate. This flexibility is built in to reflect that there may be a range of different IP requirements across the programme depending on Industry Sponsor needs.

#### International Student Fees:

If the student is from outside of the EU, please indicate in the 'Other' column '4' of the table the additional source of funding to cover the shortfall in fees in relation to international students. These additional fees should be covered by the university / Industry Sponsor, or other source (if so please name the source in column '4' of the table).

#### Enhanced Stipend:

The stipend level through this scheme is based on £15K per annum over four years. Enhanced stipends can be offered at the discretion of the University / Industry Sponsor. Any enhancement must be provided by the University / Industry Sponsor. The NMIS-IDP stipend contribution is capped at £30K for a four-year project.

#### Project Delivery Costs and Total In-Kind Contribution

Additional Project Delivery Costs must be provided by the University / Industry Partner.

A minimum of £10K is recommended to cover travel, training, and other project delivery expenses. However, for some projects sums significantly in excess of this may be required for project delivery and should be fully identified in the table by completing the grey boxes in the table and adding new lines as appropriate.

## SECTION 7 – DATA PROTECTION

As part of the NMIS Industry Doctorate Programme (NMIS-IDP) application process, SRPe collects and processes personal data from application forms. We are committed to being transparent about how we collect and use that data, and to fulfilling data protection obligations. Full details on SRPe's approach to data management in relation to the NMIS-IDP application data are provided in Section 10 of these guidelines.

## SECTION 8 – APPLICANT SIGNATURE & INSTITUTIONAL APPROVAL

Applicants must ensure that the application form is signed by an authorised institutional approver (i.e. Dean of Engineering / Research / Head of School).

Applications submitted without institutional sign off will not be eligible for funding.

## 5. INTELLECTUAL PROPERTY

Intellectual property arrangements should be agreed between the academic institution and industry sponsor.

Details must be provided on the Application Form regarding SRPe / NMIS access to outputs and Intellectual Property. Details must also be provided on how the Intellectual Property generated within the project will be agreed between the university, Industry Sponsor (company) and the student, including details on how the outputs and outcomes of the research project will be published in the public domain including details on, and reasons for any restrictions on this.

## 6. SUPPORTING DOCUMENTS

Applications to the NMIS-IDP must be accompanied by the following supporting documents:

- A Letter of Support from the Industry Sponsor, including a statement on their cost contribution to the project
- Student CV and copies of academic (undergraduate & postgraduate) qualifications (if the student has been identified)

## 7. REVIEW AND ASSESSMENT PROCESS

Following initial eligibility checks applications to the NMIS-IDP will go through a formal review and assessment process involving the SRPe Advanced Manufacturing Thematic Leadership Group, the SRPe Board and NMIS Planning & Delivery Group (comprised of key NMIS stakeholders across academia, government and public sector agencies).

SRPe will provide feedback to unsuccessful applicants. Unsuccessful applications may be resubmitted to future NMIS-IDP calls.

## 8. AWARDS AND CONDITIONS OF AWARD

Following the review process, applicants will be notified of the outcome via email by 2<sup>nd</sup> December 2019. This will be followed up by formal Offer of Award within approximately one week.

On notification of an award, successful applicants will be required to confirm acceptance of the award via email.

The funds will be transferred directly to the applicant's institution upon receipt of student registration details. The institution will be responsible for managing the award in accordance with the NMIS-IDP Terms & Conditions, and in accordance with the financial and overall postgraduate research regulations of their host institutions.

## 9. TIMELINE

This call will fund NMIS-IDP projects commencing in January 2020. The table below outlines the key dates for the call.

Call Opened	w/c 5 <sup>th</sup> August 2019
Application Deadline	18 <sup>th</sup> October 2019
Notification of Award	2 <sup>nd</sup> December 2019
Project Start Date / Student Registration	January 2020
Student Registration Final Deadline*	31 <sup>st</sup> March 2020

\*Any request to extend student registration / project start date beyond Final Deadline of 31<sup>st</sup> March 2020 must be made in writing to SRPe.

## 10. DATA PROTECTION

As part of the NMIS Industry Doctorate Programme (NMIS-IDP) application process, SRPe collects and processes personal data from application forms. We are committed to being transparent about how we collect and use that data, and to fulfilling data protection obligations.

- *What personal information does SRPe collect from NMIS-IDP applications?*

When you apply for an NMIS-IDP Award, we ask you to provide your name, job title, email address, contact address and phone number. You are also asked to provide the name, job title, email address, contact address and phone number of the Academic 2<sup>nd</sup> / Co-Supervisor and the Industry Supervisor. We also ask for the name of the student and copies of their CV and academic (undergraduate & postgraduate) qualifications (assuming that the student has been identified)

- *Why does SRPe collect this data?*

SRPe will use information provided on the NMIS-IDP Application Form and the additionally requested documentation for the purpose of processing the application to assess its eligibility and suitability for support. If the application is successful, SRPe will use the information for administration, management and reporting purposes, including carrying out appropriate checks, audits and marketing.

Scottish Government, Scottish Funding Council (SFC) and National Manufacturing Institute Scotland (NMIS) Planning & Delivery Group (comprised of key NMIS stakeholder across academia, government and public sector agencies) may use high level project data and abstract information for marketing purposes.

- *How is the data stored and who has access to it?*

SRPe will store data relating to NMIS-IDP applications using approved secure procedures. As part of the review and approval process the following parties will have access to application data and will process the data in accordance with their individual organisations' data protection policies:

- SRPe Executive Team and SRPe Board
- SRPe Application Review Team (comprised of academics from SRPe partner institutions)
- NMIS Planning & Delivery Group (comprised of key NMIS stakeholder across academia, government and public sector agencies).

- *How long is the data retained for?*

SRPe will hold data relating to NMIS-IDP applications only for as long as the information is relevant to SRPe activities.

## 11. FURTHER INFORMATION

If you have any queries regarding the NMIS-IDP application process, or require additional information, please contact Sarah Doherty, SRPe Administrator ([sarah.doherty@srpe.ac.uk](mailto:sarah.doherty@srpe.ac.uk)).