To: Innovation Voucher Programme Team

**INNOVATION VOUCHER LETTER OF NOTIFICATION (Project Terms of Reference)**

**Knowledge Provider’s Details**

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| **Establishment (including Faculty/Department if applicable) where Project work will be undertaken:** | Queen’s University of Belfast  Advanced Manufacturing and Innovation centre (AMIC) |
| **Name of individual at**  **Provider who will undertake project work:**  **Is this the first time you have been directly involved with a small enterprise in an innovation related project?**  **Have you previously worked with this client on a knowledge transfer project?** | Rohit Avadhani  NO  NO |
| **E-mail:** | r.avadhani@qub.ac.uk |
| **Telephone:** | **07732974847** |
| **Name of Innovation Voucher Co-ordinator:** | Tom Edgar |
| **E-mail:** | t.edgar@qub.ac.uk |
| **Telephone:** | 028 9097 3119 |

**Project Details**

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| --- | --- |
| **Company:** | Michael Cunnigham  Rotary Bearings Industrial Ltd  Unit 11 48-56 Duncrue Street  Belfast  BT3 9BJ |
| **Project Title:** | Proof of concept control architecture for condition based lubrication |
| **Voucher Reference:**  **Voucher Expiry Date:** | IV 130328374  18/07/2025 |
| **Project Start Date:** | 05/11/2024 |
| **Project Completion Date:** | 05/01/2025 |
| **Breakdown of project activity and associated costs:**  **1 days**  **£600**  **2.1 days + Equipment cost ( £ 500)**  **£1800**  **2 days**  **£1200**  **2.5 days**  **£1500** | The project is centered on establishing a Proof of concept(POC) for a condition based lubrication system. The aim is to validate the connectivity and functionality of selected components – specifically, condition-monitoring sensors, micro PLC and PLC-driven lubricators in automating lubrication process with limited human input.  The initial focus is on determining whether elements can interact as intended within a controlled test setup. Additionally, data from the sensor setup will be absorbed into the proof of concept to provide a foundational feasibility report about future system capabilities.  The items below detail the work AMIC will undertake to produce deliverables:   * *Initial review of the technologies available for connectivity.*   **Description:** AMIC will assess the available sensor options from the client’s list, determining suitability for condition-based lubrication requirements. **Deliverable:** Initial report on sensor choices and connectivity technologies.   * *Component Integration and additional middleware requirements with costs.*   **Description:** AMIC will assemble and integrate the components specified by the client, identifying any additional middleware or setup adjustments needed.  **Equipment:** [power supply](https://uk.rs-online.com/web/p/din-rail-power-supplies/1457873?gb=s) = £ 25  [microplc](https://uk.rs-online.com/web/p/plcs-programmable-logic-controllers/2600885?gb=s) = £ 145  [middleware for websocket / api connectivity](mailto:philip.clarke@forestrock.ie) = £ 126  [enclosure](https://uk.rs-online.com/web/p/general-purpose-enclosures/2023899?gb=s) = £ 95  miscellaneous items = £ 109  **Deliverable:** Test setup for POC with a report on equipment and middleware.   * *Comprehensive CBL System Architecture Design.*   **Description**: AMIC will work on establishing data flow by configuring and experimenting with connectivity protocols and control architectures needed for reliable sensor communication. **Deliverable**: Report on control architecture and protocols used.   * *Final Report, error handling and integration .* **Description:** AMIC will conduct multi-case experiments, record findings, and advise on errorhandling and data interpretation for the client’s onsite trials.**Deliverable:** Comprehensive project report with experiment documentation and guidance for client testing. |
| **Total Cost:** | £ 5,000 |
| **Number of project days:** | 8.5 |

**Intellectual Property Declaration**

**I confirm that intellectual property and confidentiality issues have been considered and discussed with the client.  Necessary agreements have been put in place, where appropriate.**

**Any IP developed as a result of this Innovation Voucher project will belong to/be assigned to the company unless both parties have agreed otherwise.**

**I confirm that there is no conflict of interest in relation to my/our engagement as the knowledge provider on this Project.**

I confirm that this Letter of Notification has been copied to and agreed by the client.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please e-mail to [innovationvouchers@investni.com](mailto:innovationvouchers@investni.com).

Innovation Voucher programme staff contact details:

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