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## POSITION DESCRIPTION

# Senior Microfactorie Engineer

Faculty/Division	Science
Classification Level	Professional 7/8 broadband G - Administrative, Clerical, Computing, Professional & Research Staff
Hours & Span (Category)	
Position number	00203575
Shiftwork status	NOT SHIFTWORKER
Allowances	N/A
On call arrangements	N/A
Original document creation	29 August 2024

### Position Summary

A Senior Microfactorie Engineer plays a key role within the Centre for Sustainable Materials Research and Technology (SMaRT)) in providing expert knowledge and technical skills for the delivery of projects related to SMaRT Centre and Microfactories.

The core aims of the SMaRT Centre are to develop novel research for sustainable materials and manufacturing processes, build industry partnerships to activate research for real world impact, and to disseminate green materials and manufacturing technologies that benefit industries, local communities, and enhance sustainable economic growth internationally. Founded in 2008 by ARC Laureate Fellow Scientia Professor Veena Sahajwalla, the SMaRT Centre at the University of New South Wales works with industry, global research partners, not-for-profits, local, state and federal governments, on the development of innovative environmental solutions for the world's biggest waste challenges.

This role involves high level project management, including the development of key programs and projects for the Centre, the provision of expert knowledge in the field of materials and/or manufacturing, the application of analytical technical skills required for material analysis and prototyping and the development of communications and strong internal and external stakeholder relationships.

The role reports to the Head of Microfactories, supporting Professor Veena Sahajwalla, Director of SMaRT Centre and has no direct reports.

## Accountabilities

Specific accountabilities for this role include:

Level 7:

- In consultation with the Centre's Director and/or Head of Microfactories and following centre protocols, employ expert knowledge and technical skills for material analysis, prototyping and conducting translational research and development.
- Develop project plans and schedules and participate in planning processes as required.
- Independently monitor, track and report on the status of project deliverables to ensure time, cost and quality metrics are in line with approved project plans for assigned projects.
- Provide a high level of proactive project support to the Microfactories project team and stakeholders.
- Provide guidance to junior team members and staff.
- Assess and manage project risks and issues and provide solutions where applicable.
- Develop and manage effective communications with key internal and external project stakeholders.
- Align with and actively demonstrate the [Code of Conduct and Values](#)
- Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the psychosocial or physical health and safety of yourself or others.

Level 8 (In addition to the above):

- Proactively initiate translational research and development in consultation with the Centre's Director and/or Head of Microfactories.
- Take a lead role in managing project outcomes with key external stakeholders, including industry partners, government, and community organisations, identifying problems and proposing possible solutions.
- Provide expert technical guidance, supervision, and mentoring to junior team members and students.
- Manage project dependencies, risks, issues and financials and work with the Centre's team to ensure appropriate arrangements are in place.
- Work closely with the Head of Microfactories, UNSW SMaRT Centre Director, Faculty of Science and Division of Enterprise to access relevant IP, resources and support.
- Manage adherence to UNSW and other relevant governance pathways to ensure projects are managed within a defined, consistent and proven set of rules for project development and implementation.
- Develop costing models and process documentation that can be replicated and utilised long-term to facilitate project tracking and evaluation.
- Develop new IP and expand the portfolio of Microfactories Technologies in collaboration with the SMaRT Centre Director and Head of Microfactories.
- Ensure hazards and risks psychosocial and physical are identified and controlled for tasks, projects, and activities that pose a health and safety risk within your area of responsibility.

## Skills and Experience

### Level 7:

- A relevant tertiary qualification with subsequent relevant experience or equivalent competence gained through any combination of education, training and experience.
- Proven skills in and knowledge of a selection of the following:
  - Software programming;
  - Mechanical Design using either SolidWorks or Inventor Cad package;
  - Electronics and electrical engineering;
  - Prototyping using industrial technologies such as, but not limited to, injection moulding, compression moulding, 3D printing, and extrusion.
  - Material analysis using analytical techniques, such as, but not limited to, FTIR, GCMS, TGA, and BET; and
  - A range of computer systems and applications, including MS Office, SimaPro, and Matlab.
- Excellent written and verbal communication skills, with a high level of attention to detail for deliverables produced.
- Demonstrated success working effectively and collaboratively on initiatives with people at different levels within an organisation.
- Excellent time management skills, with a demonstrated ability to respond to changing priorities, manage multiple tasks and meet competing deadlines by using judgement and initiative.
- Proven project experience, with an understanding of the project life cycle and development of project plans, objectives and documentation.
- Demonstrated ability to work collaboratively and productively within a team, and to take initiative and work independently while managing competing demands.
- An understanding of and commitment to UNSW's aims, objectives and values in action, together with relevant policies and guidelines.
- Knowledge of health & safety (psychosocial and physical) responsibilities and commitment to attending relevant health and safety training.

### Level 8 (In addition to the above):

- Experience in managing and leading a team to deliver successful project outcomes with a focus on collaboration and team engagement.
- Demonstrated success designing and delivering strategies, programs and initiatives as part of the SMaRT Centre team.
- Demonstrated experience in implementing and managing KPIs, reporting and governance.
- Proven project management experience with an understanding of strategic development of project plans and objectives.
- Knowledge of budgeting and resource allocation procedures.
- Ability to lead, motivate and train team members, to establish priorities and manage competing deadlines for self and others.

- Ability and capacity to direct and monitor the implementation and effectiveness of the safety management system.

#### **PROGRESSION STATEMENT**

The incumbent will normally be expected to have reached the top step of level 7 prior to progression to level 8. Criteria for progression to level 8 will be based on satisfactory performance of all duties and accountabilities at level 7 and a demonstrated capacity to take on the duties and accountabilities of the position at level 8.

#### **About this document**

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role.