Job Title: Electronics Development Manager
Band: Band M
Reports To: Head of ESD
Vetting: MVSC

Brief Description of Unit

Technology, Research and Innovation (TRI) is part of Operational Technology within the Met Operations 3 command and is responsible for keeping the MPS at the forefront of new and emerging technologies. We achieve this by researching and developing innovative solutions for Operational and Corporate MPS customers, including Counter Terrorism. The work we do is highly creative and includes:

- Undertaking research activities with Academia.
- Exploring new off-the-shelf technologies.
- Taking commercially available products and modifying them.
- Where a solution does not exist, creating one; this may be through the development of bespoke electronic hardware/software/IT solutions or a combination of these.

Delivery of these solutions involves the complete lifecycle from developing requirements with customers, producing design solutions, and turning these designs into fully functional products, or systems, for use in the field. TRI specialises in delivering tailored technical solutions to meet immediate operational requirements, rapidly.

Description of Department

The Electronic Systems Development (ESD) team develops bespoke electronic solutions to unique business issues relating to some of the more specialist and sensitive parts of the MPS / National policing network. Delivery of these solutions involves the complete lifecycle from developing requirements with customers, producing design solutions and turning these designs into fully functional products or systems for operational use in the field. Some of these systems require on-going support due to their specialist or short term nature. Other systems will be required to be transitioned into other areas of the business. The ESD department works closely with the IT Systems Development, Research and Explore departments of TRI as well as Digital Policing and other MPS technology departments.
**Work Activities**

The Electronics Development Manager will provide day to day hands on leadership and mentoring to an Electronics Development Team, in the laboratory, to enable them to effectively deliver bespoke electronic products and systems fit for operational use in the field. This will involve the role holder using all of their hands-on electronics development and engineering skills to effectively steer and manage the team in the laboratory, to successfully deliver solutions on time to meet operational deadlines.

Working closely with a team of Development Engineers and Assistant Development Engineers, the Electronics Development Manager shall be responsible for developing requirements and managing the team to deliver robust solutions. The work will include the management of full lifecycle electronic design from concept all the way through to fully functional products or systems for operational use in the field, including support and when necessary, to end of life. The role holder will also be responsible for producing design and project plans, project documentation, managing external manufacturers and providing hands-on expert assistance to the team.

The role will involve line management of staff and helping to develop their engineering skills further, so that they are able to deal the many technical challenges the section will face in the future.

**Specific responsibilities of the Head of Electronics Systems Development**

- Leading, Mentoring and line managing a team of Electronic development engineers and using expert electronic engineering knowledge and hands on experience to get the best out of them in terms of delivery
- Managing the full lifecycle electronic design from concept to fully functional products or systems for operational use in the field, including the production of all project documentation, user manuals and guides.
- Developing novel ideas for technical solutions to meet customer operational requirements and ensuring the electronics team deliver these on time and to budget.
- Taking on some of the more complex aspects of an electronics solution and then introducing the learning outcomes into the team
- Managing third line support and complex fault analysis in laboratory of in the field alongside operational colleagues and officers
- Managing stakeholders, gathering customer requirements and documenting both technical and non-technical factors
- Assessing the feasibility of potential technology solutions including technical and non-technical factors, e.g. human factors which may impact upon the success of a development project
- Managing the procurement of parts for development projects ensuring the MPS is getting value for money from a technical and delivery perspective
- Managing small budgets to deliver projects
- Applying excellent written and oral communication skills to gather, present and articulate information to a diverse audience both internally and externally
Essential Criteria

Knowledge, Skills and Experience

Qualifications
- Degree in Electrical and Electronic Engineering
  OR
- HND in Electrical and Electronic Engineering

Desirable Qualifications
- Chartered Engineer

Experience
- Leading, mentoring and working very closely with a team of electronics development engineers
- Managing the development of technology solutions across modern electronic engineering disciplines.
- Proven Electronics Design Experience
- Applying excellent written and oral communication skills to gather, present and articulate information to a diverse audience both internally and externally
- Running project meetings to effectively steer a development team to deliver successful solutions on-time
- Managing the manufacture, production and roll-out of designed electronic solutions, with experience of electronic manufacturing techniques
- Liaison with external suppliers, manufacturers and Academia, and steering them to deliver solutions;
- Experience of product evaluation and selection against specified criteria
- Line management and development of staff to ensure knowledge and skills are current. A good all round technical background will be required to achieve this.

Proven practical experience in developing technology solutions in some of the following areas:
- General Electronics design;
- Schematic capture and PCB design;
- Miniaturization of electronic solutions
- Design of embedded systems including hardware and software;
- RF systems design and analysis;
- Audio and Communication systems;
- Design of IP based Audio and Video systems;
- Mechanical design and 3D modeling and techniques;

You will be required to undertake security clearance to SC level in order to perform this role.

Reports To;  Head of Electronic Systems Development