



## Job Description: NZ

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**POSITION TITLE:** Engineering Manager

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**REPORTS TO:** Chief Operating Officer

**DATE:** 25/09/17

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### SCOPE OF THE ROLE

In this position you will take ownership of the engineering team and lead it to deliver multiple products and projects against strategic initiatives with support from the Senior Executive Team, product and project managers.

This is a key leadership position and will be integral in creating a positive and collaborative environment, within Engineering but also as a positive influence across EROAD. The Engineering Manager will:

- Lead with integrity and promoting EROAD's values.
- Support a positive culture and work environment.
- Not afraid to challenge the status quo.

The Engineering Manager is a leader who first and foremost exhibits the eight values, principles, and practices of Lean Leadership, as summarized below:

- Take an economic view of the full value chain
- Embrace the Agile Manifesto
- Develop people, not things
- Own the system of which you speak
- Decentralize control
- Unlock the intrinsic motivation of knowledge workers
- Implement software development flow. Visualize work. Manage Work In Process.
- Build high-performing teams

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### RESPONSIBILITIES

Further, the manager has personal responsibility for the coaching and career development of direct reports, takes responsibility for eliminating impediments, and actively evolving the systems in which all knowledge workers operate. He or she understands that there is no one size fits all management style when leading people and the people they lead are critical to the success of the business.

You will have a delivery focus and a strong background in developing a system vision through execution in multiple teams into a production solution. You will have experience with cross-domain, cross-functional and cross-industry expertise.

You will have experience or an understanding of GPS, M2M, along with embedded and mobile development. Experience with AWS, GIS, payments and



large scale systems are desirable. You will have a strong foundation on agile, development, test, continuous integration and continuous delivery.

You will be hard working and enjoy working in a team of positive, likeminded motivated people. You will be happy to be involved in peer reviews to ensure the team is following development best practise and keeping up with the latest technologies.

### **Architecture**

Ensure the architecture team are working closely with the teams and are providing the right level of design and development support to ensure the architecture and vision is aligned and teams are operating in a high-performance manner.

### **Innovation**

EROAD is highly motivated to continue to use cutting edge development tools and keep up with the latest development processes. As part of this role there will be an ongoing requirement to research, evaluate and recommend:

- Appropriate tool chains
- Improvements to development processes
- Future technologies to pursue

Ensure the teams are spending time on innovation as part of the on-going sprint cycle and that business value is derived from the innovation days.

### **Development and Implementation**

- Assist with ensuring that best practise design and implementation is being followed.
- Ensure programming best practise and coding guidelines, version control, automated build and test processes.
- Ensure all development has the appropriate defensive programming and can be easily monitored in production to ensure the product is working as design or issues are quickly identified or prevented.
- Hands-on assistance to develop and test more complicated or new areas to lead by example.

### **System Test and Deployment**

- Ensure testing is the responsibility of all.
- Ensure acceptable coverage of use cases with unit, integration and manual tests
- Allow UX testing, exploratory testing and ensure the customer edge cases are covered before product is release to the customer unless in POC/beta
- Build in significant automation and monitoring to ensure EROAD can release software safely with confidence to serve our customers and protect our brand



- Contribute to test plans and unit tests to validate subsystems as well as the complete integration of the end to end system.
- Facilitate and ensure scalability, performance and security tests are performed

#### **Bug fix and Continuous improvement**

- Continuous monitoring of code base and product quality.
- As bugs are identified they need to be verified, prioritised and resolved. You will be the leader of the teams contributing to this process and ensure EROAD controls technical debt.

#### **Leadership**

- Helps attract, recruit and retain capable individuals
- Serves as coach, advisor and career counsellor to direct reports
- Participates in administering compensation and benefits
- Evaluates performance, provides input, guidance, and corrective actions as necessary
- Helps employees navigate through the personnel and administrative systems
- Has subtle control in assignment of individuals to teams. In the case when teams themselves are simply unable to address their individual and team performance issues, makes personnel changes as necessary to help assure that every employee can participate in an effective, high performance team.
- Helps establish mission and purpose for the teams under supervision
- Continuously assists in aligning teams to the business and program mission including capacity planning.
- Coaches improvement of agile technical practices and be a lead member in the advancement of lean/agile practices within the organisation

#### **Product Development**

- Has a commercial focus – and works with the SET, and other management members to ensure EROAD has a world-class product development and delivery process that is “right sized” and appropriate for EROAD’s business.
- Ensure that all staff and contractors are aware of development process and how to use it.
- Ensure products are appropriately specified at both functional and technical levels to meet customer and stakeholder needs.
- Ensure critical technical/technology/development problems are debated openly, based on facts and logic involving the relevant people across the company. Commercial factors such as cost, time to market and risk also need to be considered in these discussions. Any critical decisions are documented for future reference.
- Review and challenge all technical assumptions made in determining a solutions, project cost and task duration.



	<ul style="list-style-type: none"> <li>• Complete as required various architectural, design, development and implementation tasks.</li> <li>• Work with Product &amp; Portfolio Manager to define priorities and sign off development releases</li> <li>• Prioritise the roadmap for current and future product releases.</li> <li>• Review and validation of technical design and development.</li> </ul> <p><b>Strategy</b></p> <ul style="list-style-type: none"> <li>• Is involved in the development of a technical road map for core EROAD technologies.</li> <li>• Assist with developing EROAD's product and Service road maps.</li> <li>• Contribute to EROAD's strategic plan.</li> <li>• Works alongside the SET to identify strategic technologies EROAD should invest in.</li> </ul>
<p><b>COMPETENCIES</b></p>	<ul style="list-style-type: none"> <li>• Able to delivery through teams simple, high-availability, scalable solutions delivering against company goals and working across the SDLC</li> <li>• Solid understanding of continuous delivery</li> <li>• People management of employees including career development, performance expectations and compensation</li> <li>• Able to define specific development outcomes</li> <li>• Active coaching of employees to advance their technical, functional and team skills</li> <li>• Can provide technical leadership - able to outline and drive technical strategy through leadership of others and effective communication.</li> <li>• Strong problem-solving ability</li> <li>• Able to provide technical leadership as required within EROAD's team of developers (both internal and third party).</li> </ul>
<p><b>PERSONAL ATTRIBUTES</b></p>	<p><b>Manager as Servant Leader</b>  A mindset change is often required for transition from a traditional manager to the servant leader style implied by the Principles of Lean leadership. Servant leadership is a leadership philosophy that implies a comprehensive view of the quality of people, work and community spirit.</p> <ul style="list-style-type: none"> <li>• Listens and supports teams in problem-identification and decision-making</li> <li>• Creates an environment of mutual influence</li> <li>• Understands and empathizes with others</li> <li>• Encourages and supports the personal development of each individual and the development of teams</li> <li>• Persuades rather than uses authority</li> <li>• Thinks beyond day-to-day activities</li> <li>• Supports the teams' commitments</li> <li>• Highly motivated</li> <li>• Strong problem-solving skills.</li> </ul>
<p><b>REQUIRED EXPERIENCE</b></p>	<p><b>Essential Skills for this key leadership position:</b></p> <ul style="list-style-type: none"> <li>• 7+ years' experience as a developer</li> <li>• 3+ years' experience leading one or more teams with direct reports</li> </ul>



- Test experience or a strong understanding of agile test
- Solid experience with Agile using SCRUM, Kanban and other agile frameworks
- Ability to share and communicate ideas clearly, both orally and in writing, to executive staff, business sponsors, and technical resources in clear concise language appropriate for each group
- Understanding of multiple development technologies and languages – Java, .Net, C/C++, Ruby, Python etc.
- Experience with multiple databases – PostgreSQL, MySQL, Oracle, NoSQL
- Experience with AWS and associated cloud technologies.
- Experience with SOAP and REST services using XML and JSON
- Experience in designing to address Non-functional requirements and making sensible design decisions (e.g. security, scalability, cost)
- Experience with Service Oriented Architecture, SaaS multi-tenanted cloud deployments

**Desirable:**

- Bachelor's degree.
- Experience with large scale GIS, payments and/or transactional systems
- Experience in an IaaS environment like AWS to deliver high scale horizontally.
- Experience with hardware and firmware (embedded / Internet of Things)
- Experience with mobile application development
- Experience with caching, in-memory databases and NoSQL
- Understanding of security concepts – authentication, authorisation, OWASP, transport, encryption, OAuth, SSO, 2-factor, tokens etc.
- Project or product management experience
- Appreciation of usability design

This Job Description is not intended to be complete or limiting – the role will require a proactive and flexible approach to manage tasks that support a rapid and innovative product development environment.

EROAD is in a “high growth” mode. There will be times when the role will be required to complete tasks outside those mentioned above because this role will have the relevant skills and may have higher availability than other team members.