Job Description

Position: GIS Programming & Modelling Engineer x 2

Responsible To: Information Management Manager

Date: 20 January 2010

Job Summary and Purpose:
To support the AMA Team's business objectives by building a strong Information and data management team. Outputs contribute to the KRA, KPI, reporting and operational needs of the Auckland Motorway Alliance. Key to this role is the creation of world first class asset & operations view of the roading network. This core spatial role will require providing an integrated and complete GIS & Spatial environment that will support the AMA in meeting its KRA objectives.

ORGANISATION CONTEXT

Internal Relationships
- All AMA staff

External Relationships
- RDC
- NSCC
- WAITCC
- MCC
- PCC
- NZTA - AK
- NZTA - WELL
BACKGROUND

New Zealand Transport Agency (NZTA) has entered into a 10 year Alliance Agreement for the asset management maintenance and operation of the Auckland Motorway & State Highway network. It is expected that the Alliance will redefine best practice in highway maintenance and traffic operations for New Zealand. The Alliance is also the most significant maintenance operations Australasia. The Alliance is a collaborative working environment comprising and high performing team from NZTA, Fulton Hogan, Opus International Consultants, Beca Infrastructure, Resolve Group and Armitage Systems focused on achieving outstanding results for the Auckland region. The Alliance will be responsible for all maintenance, traffic operations and management activities for the Auckland Motorway network (excluding the Auckland Harbour Bridge), for a period of 10 years.

VISION & PRIMARY PURPOSE

Best Network, Best Service, Best Team.

To operate and maintain a connected network for all stakeholders where customers feel informed and are confident that they will get to their destinations comfortably, safely and reliably at all times.

The role of the GIS Programming & Modelling Engineers is fundamental to enabling the wider work streams in the AMA to define the words “pleasant” “comfortably” “safely” and “quickly”.

You will be challenged with the formidable task of assisting the Auckland Motorway Alliance to define via complex multilayered and often extremely challenging spatial deliverables, how it is performing against its own Key Result Areas and Key Performance Indicators.

If you are passionate about working with GIS and the practical application of spatial tools to help a high performance team achieve the very best for the road users of Auckland then we need your skills in our business intelligence Information Management Unit.

This group in the Alliance is responsible for the analysis and transformation of data into Business Intelligence & Spatial Outputs which can then be utilised by other work streams in the wider AMA for improved decision making, operations and asset management.

KEY RESULT AREAS FOR AMA

Maximising Network Efficiency
- Improved and more reliable access and mobility for people and freight

Being a customer and stakeholder driven organisation
- Establish effective relationships and deliver what we promise.

Delivering a positive legacy for future generations
- Create a lasting contribution to the region and industry.

**Delivering enhanced value for money**
- Improve VfM in the delivery of network asset management, operations and maintenance.

**Creating and maintaining a healthy and enthusiastic organisation**
- A vibrant and fulfilling work environment Safety, Development, Culture, Wellness

---

The requirements of this position, **GIS Programming & Modelling Engineer** are broadly identified below:

### ACCOUNTABILITIES

<table>
<thead>
<tr>
<th>Key Accountabilities / Tasks</th>
<th>Key Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To provide GIS outcomes, processing and manipulation to meet Alliance objectives and reporting needs.</strong>&lt;br&gt;Development of high level design and conceptual GIS data architectures.&lt;br&gt;Development of functional relationship specifications.</td>
<td>1) Delivery of GIS &amp; Spatial outputs, processing, query building, code construction.&lt;br&gt;2) Contribution to the development of a world class GIS based Asset Management framework that allows the Alliance to better manage its activities and add value to the Asset.&lt;br&gt;3) Undertake spatial analysis/GIS work and work as assigned to achieve a high client satisfaction and productivity&lt;br&gt;4) Provide high quality cartographic outputs as needed</td>
</tr>
<tr>
<td><strong>Data Management</strong>&lt;br&gt;Maintain and continually improve the currency and quality of core datasets.&lt;br&gt;Develop data management and asset management systems and processes as required</td>
<td>1) Reporting of data rate changes and fix ups&lt;br&gt;2) Number of new datasets deployed</td>
</tr>
<tr>
<td><strong>To take responsibility for coordinating efforts between the Data &amp; GIS team and the other delivery &amp; management arms of the Auckland Motorway Alliance</strong></td>
<td>1) Attends and contributes constructively to team meetings&lt;br&gt;2) Accompanies and advises Alliance Managers with regard to appropriate process for how to best acquire and use data to spatially enable their work stream requirements.</td>
</tr>
</tbody>
</table>
Key Accountabilities / Tasks

Manages and coordinates packages of work and projects from inception to completion

- 1) Develops and maintains high level programme for work to scope and specification.
- 2) Coordinates and manages time proactively based on defined deliverables and programme.
- 3) Is prepared to question inappropriate use of data and or to identify limits to GIS processing and reporting tools.
- 4) Is prepared to specify correct GIS tools and software to get the job done.

Defines and Develops Spatial Data Processing Architectures

- 1) Ensures they are continually up to date with emerging technology and trends as the pertain to the GIS environment.
- 2) Contributes actively towards the development of a high level overarching AMA spatial asset management.

Note: The above performance standards are provided as a guide only. The precise performance measures for this job will need further discussion between the job holders as part of the performance development process. There will also be other duties from time to time that are not listed, that maybe required, that add to the overall performance of the division and the AMA.

PERSON SPECIFICATION

<table>
<thead>
<tr>
<th>Essential</th>
<th>Desirable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technical/Professional Qualifications &amp; Experience</strong></td>
<td></td>
</tr>
</tbody>
</table>
- A number of years commercial GIS systems experience  
- Detailed understanding of ESRI product set and extensions particularly - Arc View/ ArcEditor  
- ArcGIS Server Enterprise  
- Understanding of database structures  
- Development expertise in FLEX  
- Excellent cartographic and analytical skills |
|  
- Experience with FLEX and .NET  
- 3-5 yrs project Management  
- Stakeholder Management Experience. |
| **Skills & Attributes** |  
- Strong stakeholder |
|  
- Participate in the |
management and communications experience.
- Highly skilled in developing and maintaining effective relationships.
- Strong organisational and project management skills.
- Ability to understand and explain technical information to stakeholders as required.

Delegated Authority - these are set out and available in shared documents in Sharepoint. It is part of the induction process to become familiar with the specific authority for the position.

Health and Safety (Managers)
Take responsibility for the health and safety of their staff and self
Ensures all hazards are identified and controlled
Provides staff with appropriate information
Actively encourages and supports local workplace safety management practices

Health and Safety (no direct reports)
Take responsibility for own health and safety
Ensures own actions keep self and other safe
Identifies, reports and assists to eliminate hazards in their own workplace
Participates in local workplace safety management practices

Self development (all staff)
Takes responsibility for personal development and continually develops their own professional expertise

Core Competencies for All Staff
Expected (Value Related) Behaviours

Professional/Technical Expertise
Related to innovation and excellence value
A person demonstrating this competency will have the knowledge and skills to perform the requirements of the job.

Creating Value for Customers
Related to customer and stakeholder driven organisation
All jobs exist to provide services for customers whether these are inside the organisation (i.e. colleagues) or outside (e.g. stakeholders, citizens). A person demonstrating this competency is committed to meeting the needs of their various customers.

Teamwork
Related to putting people first, valuing employees and partnerships
A person demonstrating this competency works constructively with people to achieve a common goal.

Organising for Results
Related to innovation and excellence value
A person demonstrating this competency is strongly concerned with making things happen and with producing effective and lasting solutions. They will be energetic, efficient and effective in co-ordinating activities to meet deadlines and requirements.

Effective Communications and Relationships
Related to communication, valuing employees and alliance culture
A person demonstrating this competency will use language and style appropriate to the audience and context.

Continuous Improvement
Related to innovation and excellence value and breakthrough results
A person demonstrating this competency adjusts to change and to different perspectives, thinks proactively, pursues opportunities and takes appropriate action without being asked. They build best practice through seeking relentless improvement in the quality of our process.