

>> dTIMS CT Project in New Zealand

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Customer Profile

Organization: RIMS Group

Responsibility: Represents all New Zealand Road Controlling Authorities (80 different authorities)

Network: 100,000 km of sealed and unsealed roads



Highlights

Goal: To acquire a system that would aid in the asset planning processes used by New Zealand Road Controlling Authorities. Such a system needed to include predictive capabilities into road asset management practice.

Challenge: New system needed to accommodate all types of roads: chip seals, asphalt pavements and unsealed roads and needed to be implemented and pilot tested in 7 months

Solution: New Zealand choose dTIMS™ as their software platform and acquired a national site license. This was easily integrated with the existing system. The RIMS Group implemented the dTIMS™ software within the time frame specified satisfying all requirements, including a national training programme.

Nationwide implementation managing 100,000 km. of sealed and unsealed roads controlled by over 80 authorities.

In late 1998 New Zealand decided to implement a national pavement management system. The new system was to be used by all local authorities (cities and districts) including the intercity state highway network, consultants and contractors. This project would encompass over 80 different agencies who were responsible for a network of approximately 100,000 km of sealed and unsealed roads. The new system would build on the existing road management inventory system as well as integrate with an existing funding framework.

The initial objective was to have a completed preliminary system in place and integrated with the existing systems by mid-1999. This objectives of this system were to assist with:

- Optimal life-cycle management
- Determination of optimum level of service, as well as the cost to maintain a pre-defined level of service
- The development of maintenance strategies to satisfy the first two objectives
- The evaluation of alternative strategies, based upon variations to funding levels and/or predetermined maintenance strategies

In 1998 the RIMS Group was appointed to lead such a project, now commonly referred to as the "New Zealand dTIMS™ Project".

The RIMS Group was simply looking to find a product that would enable it to move from optimizing works associated with the pavement alone to integrating all other assets roading personnel were responsible for, such as the signs, traffic signals, road marking, street lights, etc.

David Fraser
President
Ingenium

The evolutionary nature of road management in New Zealand and the likelihood of future changes meant that it was important to adopt as flexible a system as possible. The project sponsors also did not want to tie themselves to a single supplier who would be required to make all future modifications to the system on their behalf. The system also had to fit into their objective of being an open system which allowed the users to alter the models or the framework without relying on the original software vendor. The RIMS Group recommended New Zealand acquire Deighton's dTIMS™ software.

dTIMS™ is unique insofar as it is a "shell". The user can define any form of model and the shell (dTIMS™) then applies the model and undertakes the technical analysis. It includes heuristic optimization and excellent output functions.

New Zealand acquired a national site license which made it possible for participants in the project to use dTIMS™ for any component of the road infrastructure (roads, footpaths, pipes etc.)

The dTIMS™ software was implemented and a national training programme was then developed and implemented by the RIMS Group. In 2001, the New Zealand dTIMS™ Project was awarded the IPENZ Supreme Award for engineering excellence for information technology.

Throughout the project a helpdesk was in place to ensure suitable support and system feedback is provided for, and since 2000 regional user groups have been operating. The user groups provide a forum for users to share their experiences, as well as provide input into the direction of the system through enhancements.

The migration from dTIMS 6.1 to dTIMS CT in 2004 provided an opportunity to reduce the number of supporting software applications as well as to provide decision processes that are more aligned to the criteria that NZ RCAs are required to follow.

It is expected that incremental improvements will be continued to be made based on the experience of users and as the result of research projects are incorporated.

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