



## ***SUPERIOR PERFORMANCE THROUGH TECHNOLOGY***

Presentation for the 2014 IPENZ Transportation Conference  
by Zachary Lawrence General Manager Armitage Group -  
Auckland Motorway Alliance Sub-Alliance Leadership Team Member  
Over ten years experience in the ITS industry in NZ, Australia and the UK



## ***SUPERIOR PERFORMANCE THROUGH TECHNOLOGY***

- WHAT DOES THIS MEAN FOR THE NEXT 100 YEARS OF TRANSPORTATION IN NEW ZEALAND?***
- WHERE HAVE WE COME FROM, WHERE ARE WE HEADING AND WHAT ARE THE CHALLENGES BEFORE US?***



- A growing focus on the performance return that can be gained by the use of technologies in transportation***



- There will need to be an increasing emphasis from tertiary education providers, clients and professional services on Electrical, Electronic and System engineering to complement more traditional Civil, Environmental and Mechanical engineering disciplines.***





- ***There will be a greater emphasis on technology use, management, maintenance and how these may alter traditionally understood construction or operational templates.***



- ***Increasing attention will fall on the need for consistent standards and applications for technology across all transportation sectors and transport authorities.***





- ***Ingenuity in technology choice and use will be needed in the New Zealand environment due to our far-flung transport network coupled with often restricted budgets.***



- ***Field technology has largely been procured through larger construction and maintenance contracts minimising its ability to shine; or has been separately secured by multiple authorities reducing economies of scale***

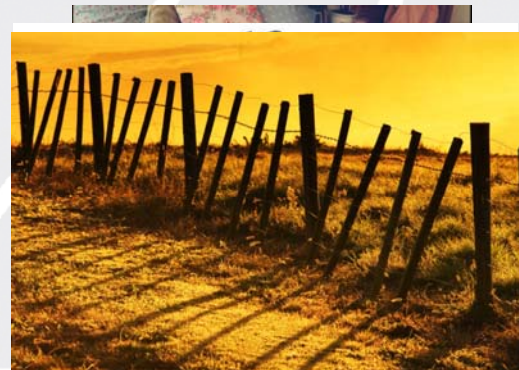


- *Issues of scale in procuring technology – firstly make sure all authorities are choosing consistent technology, secondly innovations will be needed in purchasing in order to overcome New Zealand’s small procurement footprint.*



**– Are there lessons to be learnt?**

- *Piecemeal approach resulting in a ‘patchwork quilt’ of different often incompatible and costly to maintain systems.*
- *The number eight wire mentality can pose problems in the successful implementation of transportation technology.*
- *There are many technology white elephants from the past.*

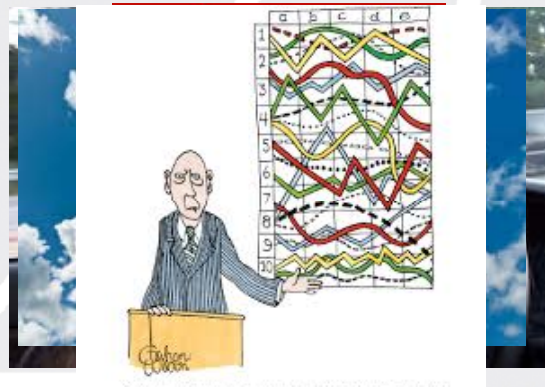




- ***We have to be careful not to simply get on the bandwagon and choose the latest shiny technology without a driving reason for its use.***
  - ***What is the burning need?***
  - ***How could technology help?***
  - ***What other considerations are there?***



- ***There will be greater data collection and interpretation work.***
- ***Not just numbers of users as has historically been the case.***
- ***But delving into the who?***
- ***The why?***
- ***And the where are they heading?***





- ***Technology alone cannot fix all ills and can often bring unforeseen problems such as increasingly shorter technology life cycles driven by other commercial sectors, heightened technology maintenance requirements, civil liberties consideration, regulation or enforcement versus advisory uses....***



- ***Ongoing support and asset management maintenance this is doubly important when the technology is your primary interface with the end-user.***



- ***CAPEX vs OPEX - whole of life costs – technology has a relatively low initial cost compared to other construction areas and services, but operational and maintenance costs and impacts can be grossly under-estimated in initial procurement.***



- ***How do we firstly compare apples with apples, then how do we compare apples with peaches? How do we judge that one offering is directly equivalent to the next, then how do we judge one potential technology in comparison to a completely different one?***





- ***Technology is an enabler of Transport Ingenuity over the next 100 years but it will not fulfil its potential performance objectives unless clear operational outcomes are defined and measured then matched against the procurement strategies available.***



***Thank You***

