



Celebrating  
**20**years

SUCCESS IS A JOURNEY,  
NOT A DESTINATION



# **Celebrating 20 years of dTIMS**

19 May 1998 - 08 May 2018

*Future proofing New Zealand's asset infrastructures*

# A fantastical journey

## Roadmap

I want to reflect a bit today on what has been a fantastical journey:

- Where we were
- The journey
- Where we are now
- What we have achieved and learned



# The journey

The historic milestones have been recorded for prosperity

You can reflect in that at your leisure

My story takes a different tact....







“Success is a  
journey, not a  
destination.”

~ Ben Sweetland ~

# Pre history

Gisborne - Early 1990  
Real world roots  
Forward works programme



Wellington - 1990's  
NOMAD  
Industry thirst for treatment intelligence



Arizona Late 1990's  
HDM3 - unsuitable



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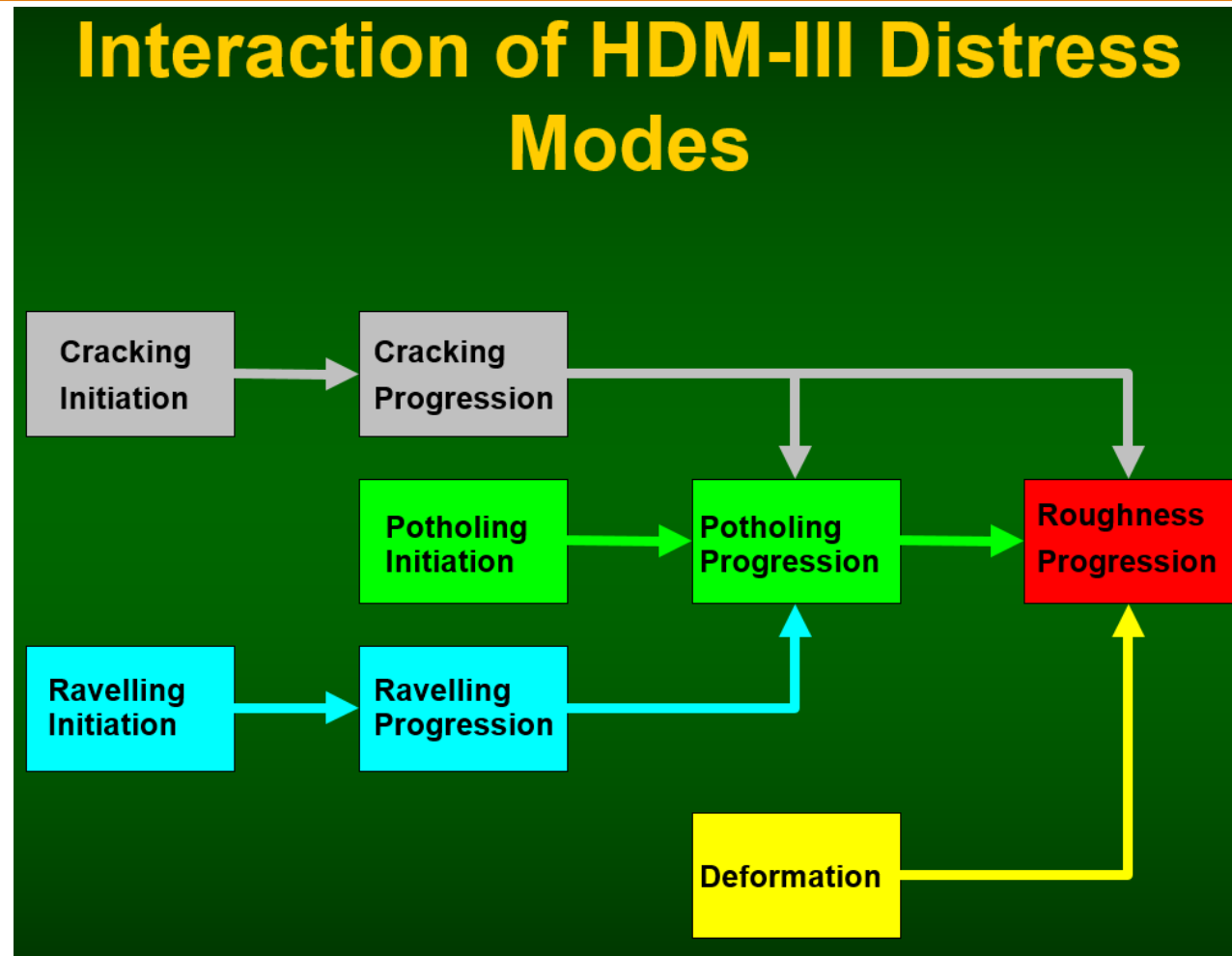


Arizona Late 1990's  
HDM3 - unsuitable





# The HDM methodology?



# The timeline

Durban South Africa

May 1998

The journey begins



Toronto Canada

May 1998 and ongoing

A sound relationship and support for NZ



Toronto Canada

Ongoing international exchange



# But what was the quest?

Cost effective whole of life stewardship

We needed the tools to give effect to our talk

➤ “Informed decision making”



# The timeline

Durban South Africa

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# So what have we learned so far

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- The goal was enhancing our ability to achieve cost effective whole of life management of our infrastructure
- Achieving a robust and stable forward works programme is central
- So is communicating to investors an evidence based programme that expresses the outcome impact
- Supported by very senior management within the transport sector
- The world bank model is good
- We chose a flexible software platform that would allow us to grow
- We have achieved a lot

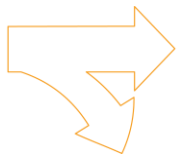
# Development

Ongoing software development



Ongoing model enhancement

IDS



Infrastructure  
Decision Support

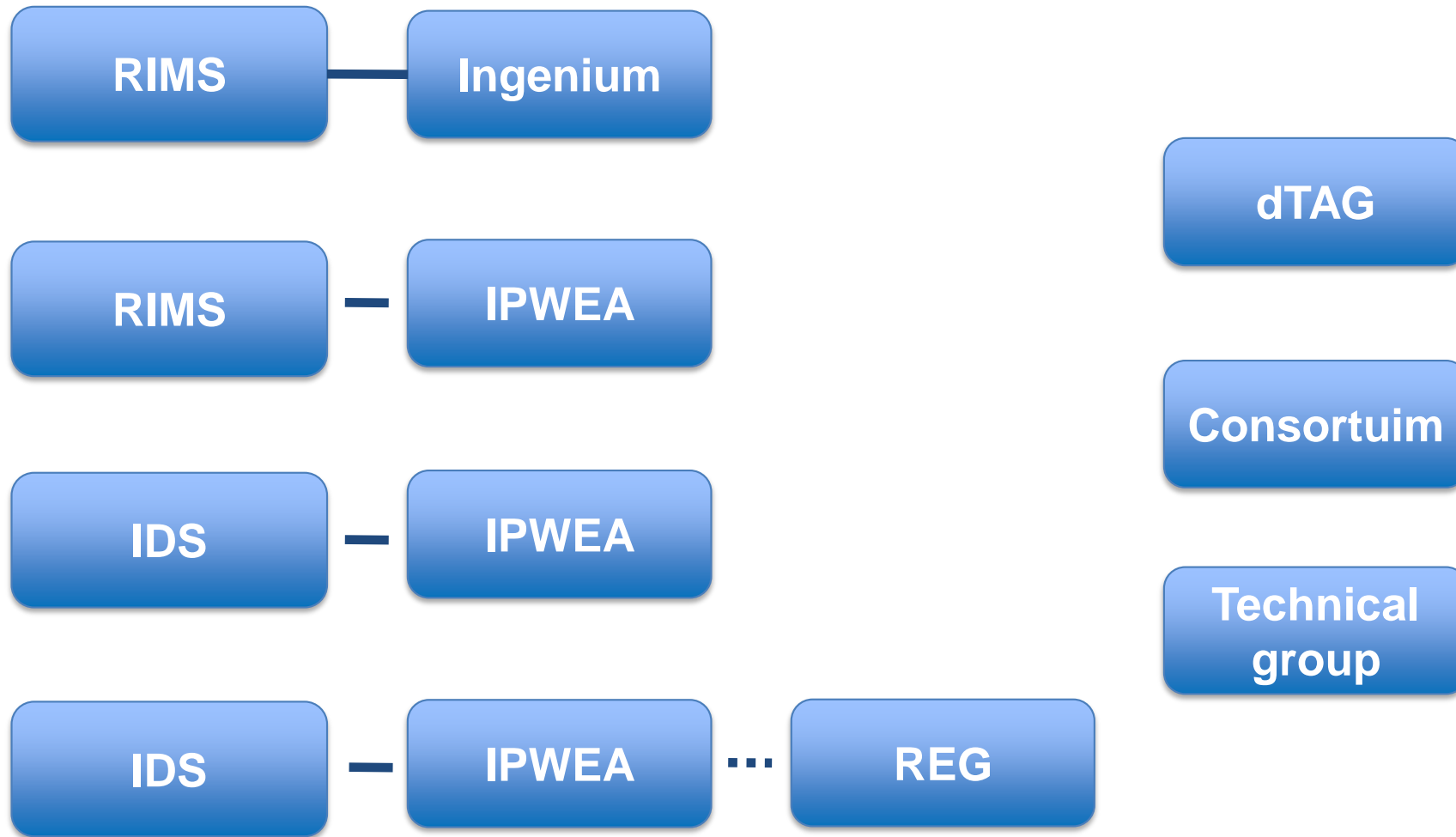
*Future proofing New Zealand's asset infrastructure*

# So what did we end up with



**Took the best of both worlds:**  
Captured the proven IP embedded in HDM  
and  
Launched it through a flexible software solution

# Survived through many administrations



# Many hurdles and benefits

- Technical
- Poor quality data
- Sufficiency of skilled modellers
- TLA buy in and support
- Funding
- Confidence/belief

- LTPP
- SH renewal reset
- 2018-21 NLTP
- Significant strategy change on other networks
- Immigration



# Many hurdles and benefits

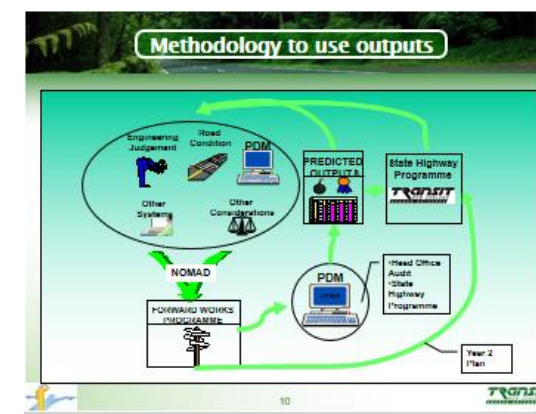
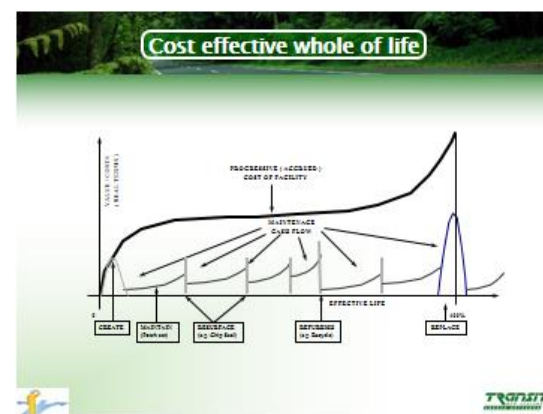
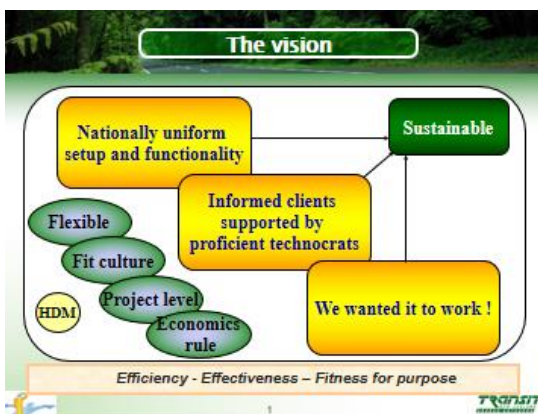
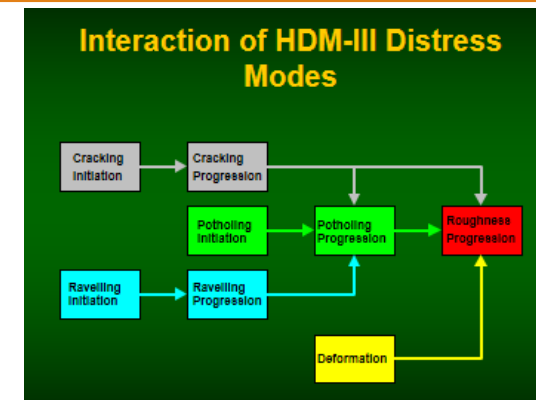
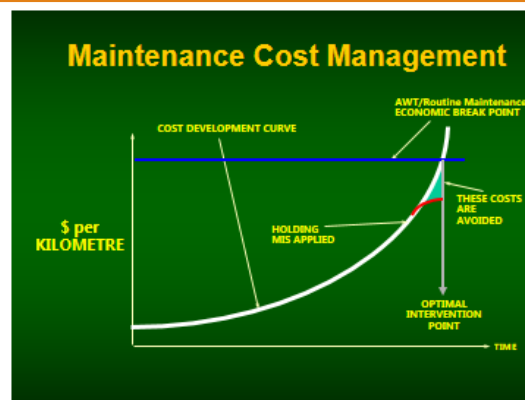
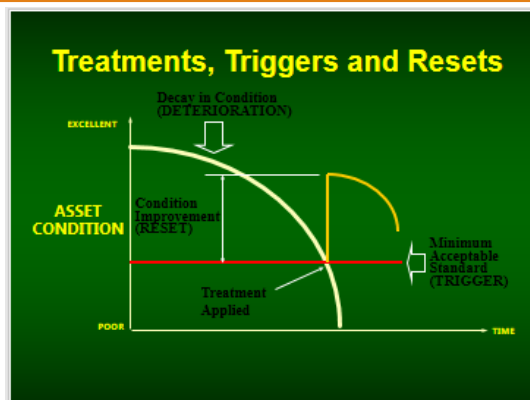
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# Project icons



# Icons – principals that needed to be embedded

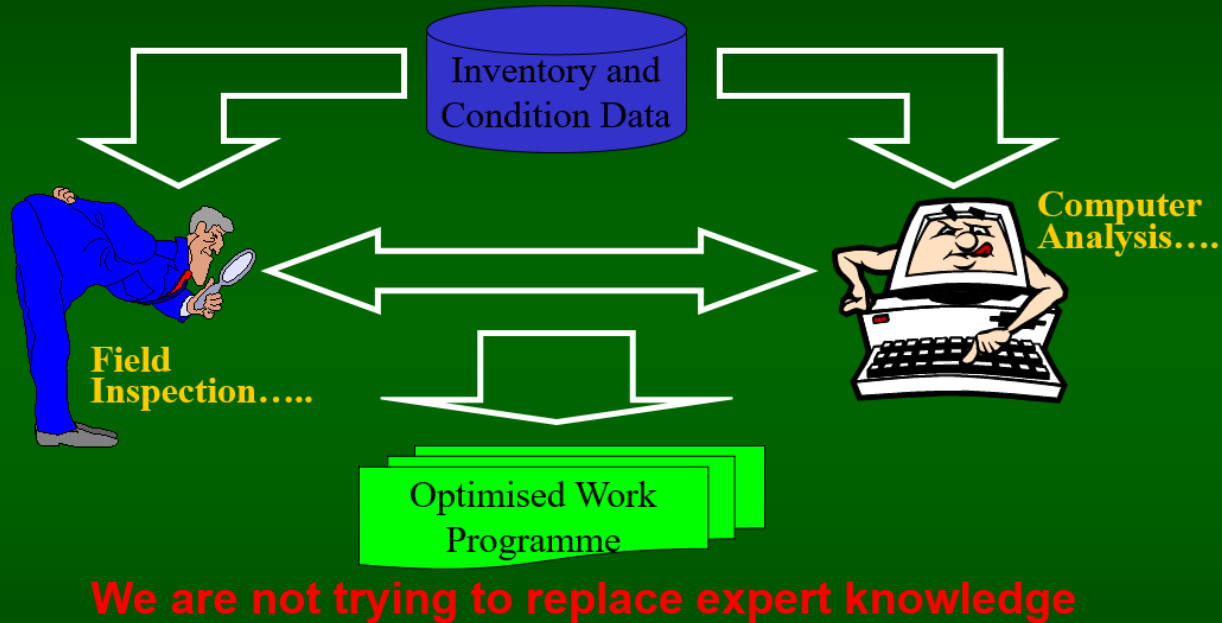


All good here

- Technical principles now well understood

# Icons – we were not trying to displace expertise

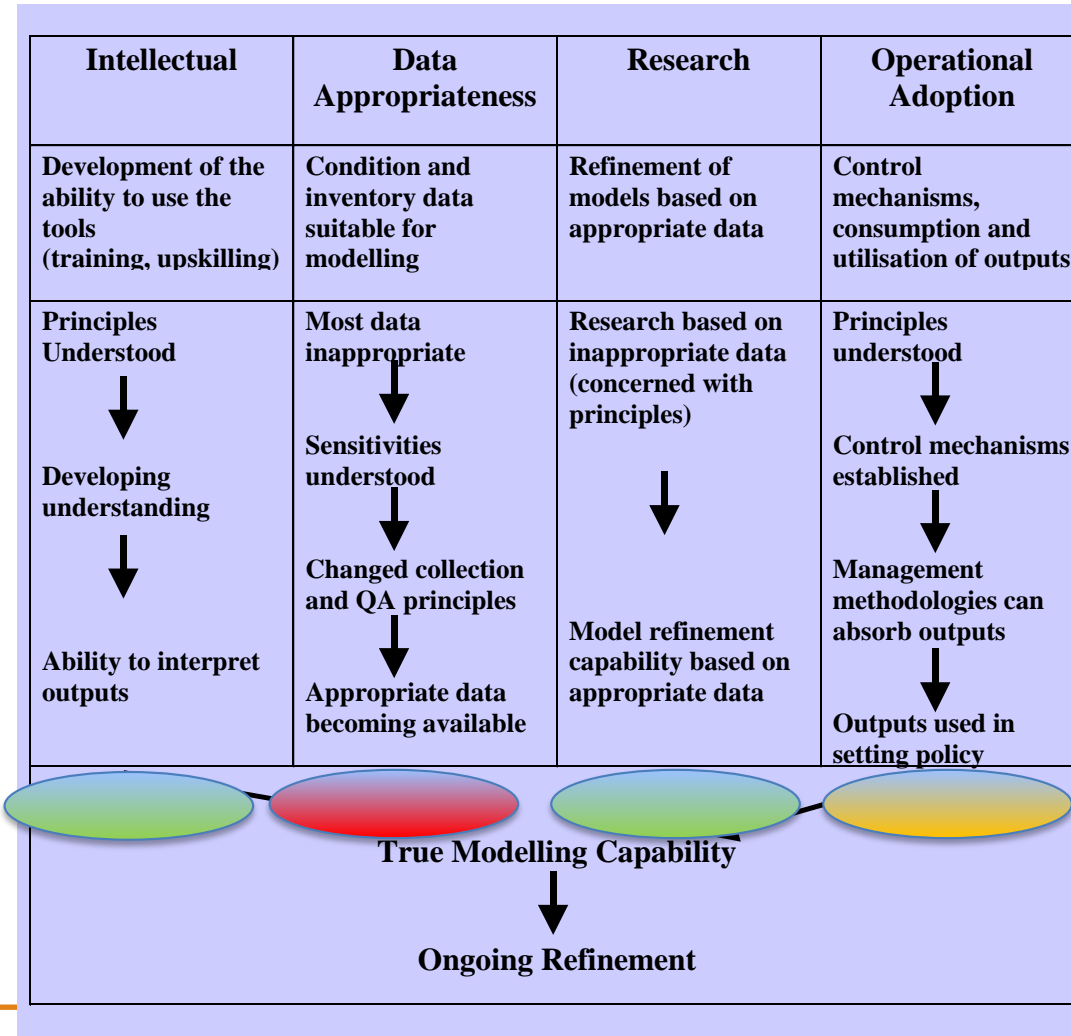
## Computer tools are only one input



All good here

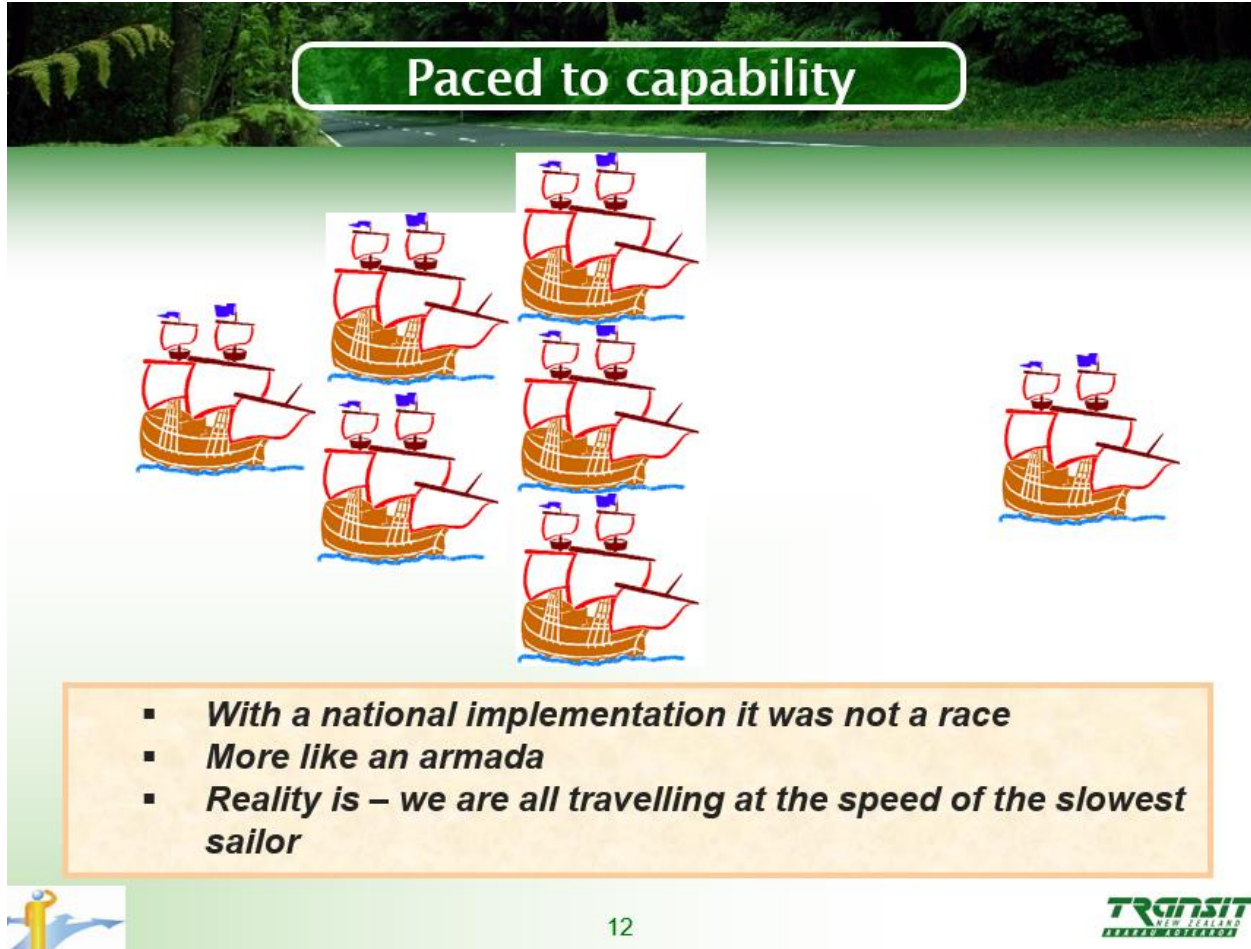
- Process has achieved world leading status
- Good integration with field input
- Some excellent tools to complement this

# Icons – development streams





# Icons – national consistency



**Paced to capability**

- *With a national implementation it was not a race*
- *More like an armada*
- *Reality is – we are all travelling at the speed of the slowest sailor*

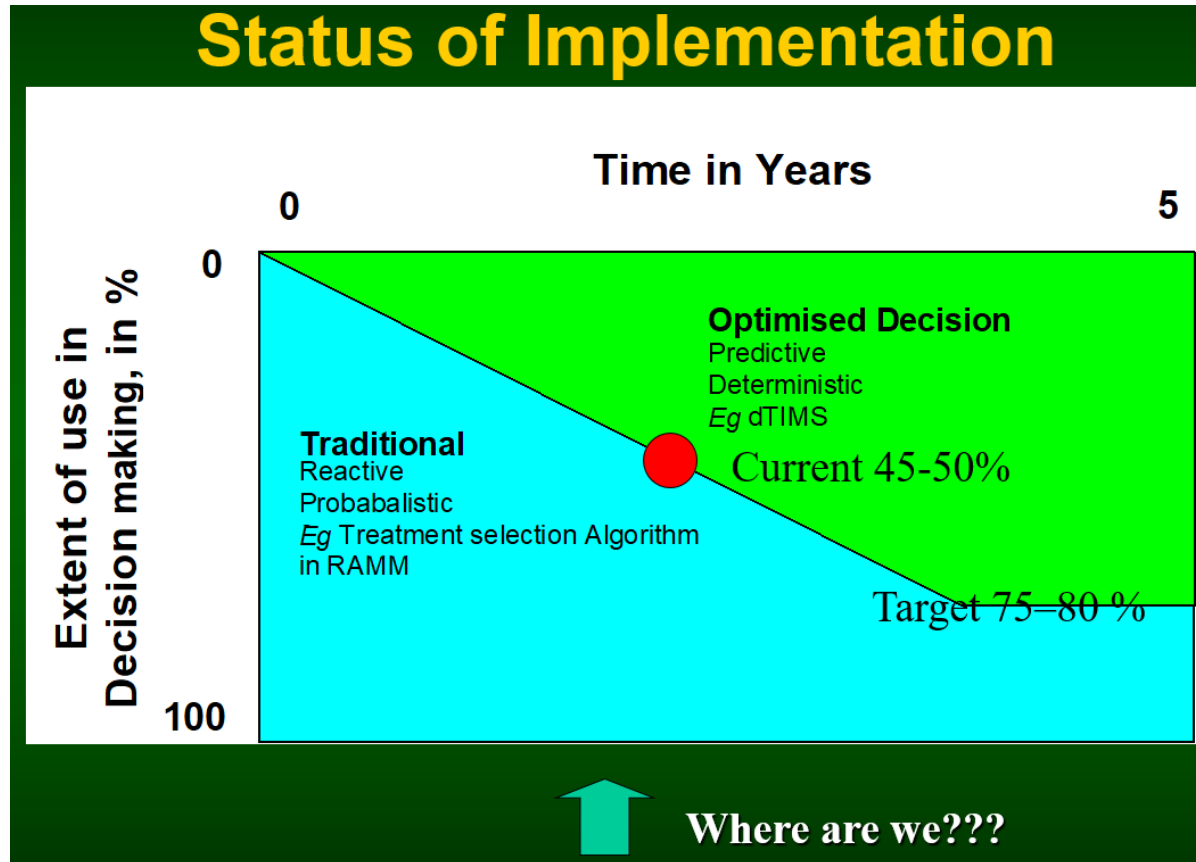
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TRANSIT  
NEW ZEALAND  
INFRASTRUCTURE

Never really fully achieved this

- Have we got the whole industry up to a consistent level of understanding and capability

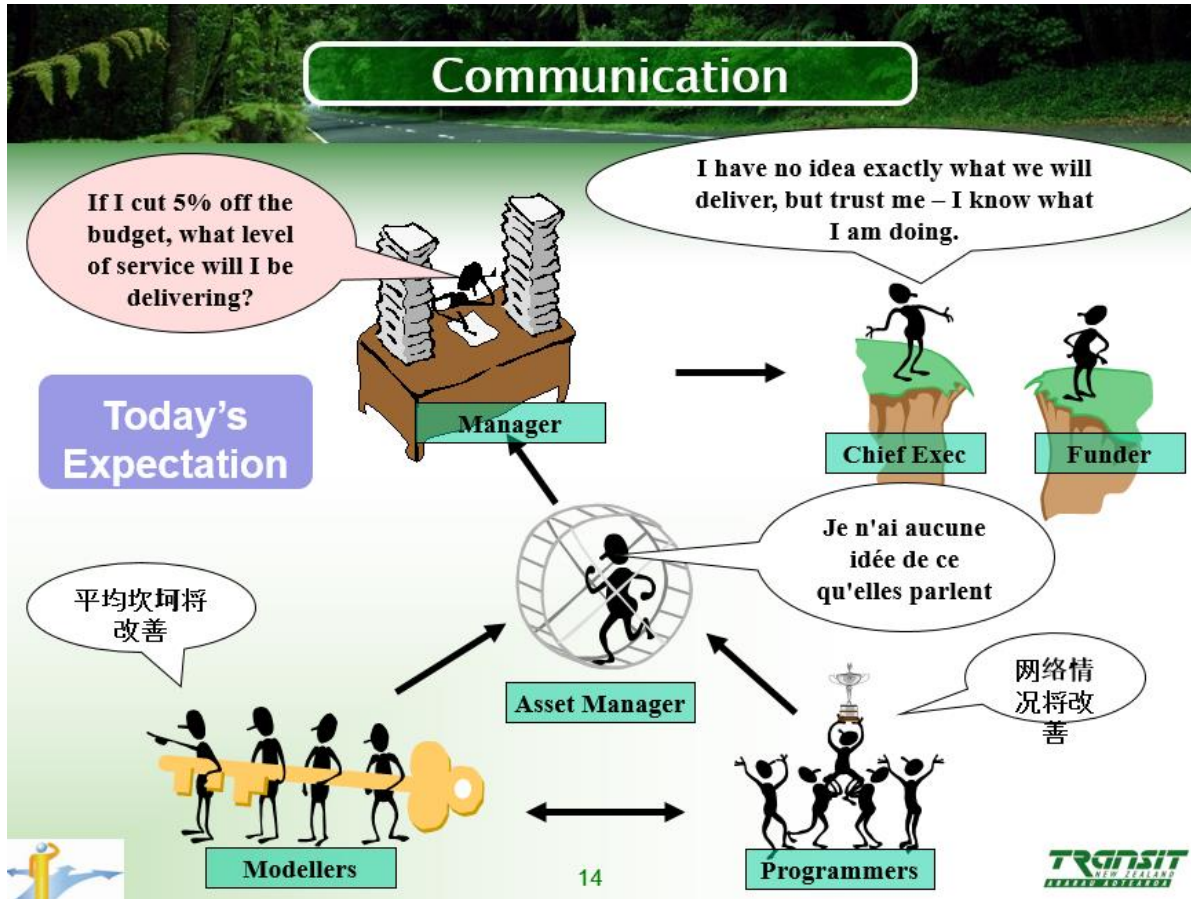
# Icons – reality of speed of uptake



We have not achieved 80%

- The main issue still being data
- Poor data = poor outcomes

# Icons



Effective communication is still an issue

- Outputs pitched at the right level
- A perception of black art

# What else have we added to our learning

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- Powerful and flexible software platform – but the model origin is HDM
- Has a sustainable future under IDS leadership
- The project belongs to the industry – it is yours
- Use of it has made significant change to investment plans for some TLA's – savings
- The project has elevated the industry knowledge of advanced asset management principles

# What else have we added to our learning

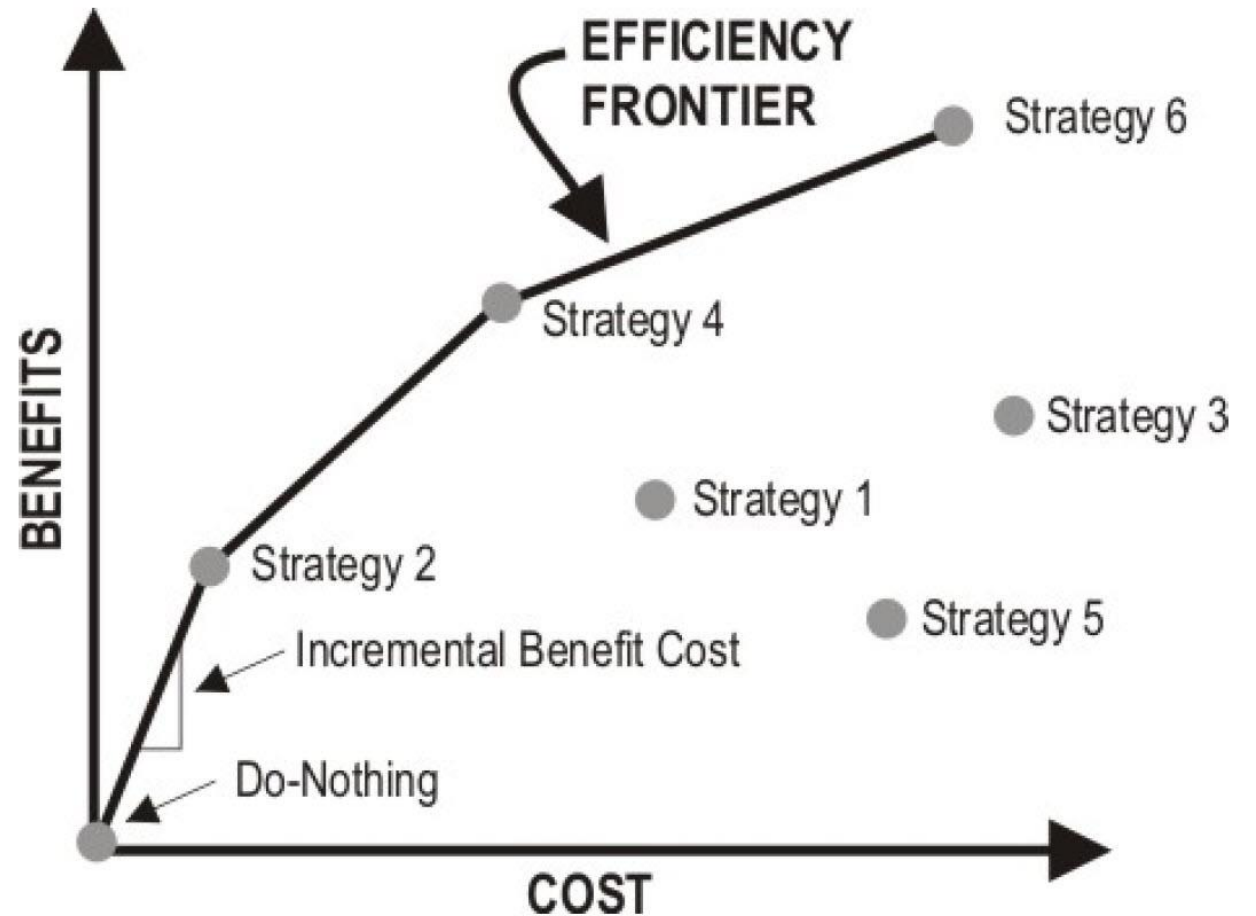
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- Data quality is still an issue and is the main reason for lower quality outcomes
- There is power in numbers – we could achieve more and faster if we stick together
- We don't do a good job of expressing the outcomes in terms that the investor can understand well



# Other things we need to remember

- Optimisation
- Long term planning vs short term prioritisation
- “What if” analysis
- Network/project
- Bureau
- Hosting



# What about ONRC and 30 year investment plans

- ✓ **ONRC objective – to differentiate investment profile depending on function**
  - Trigger differentiation by ONRC group
  - Cross asset optimisation tool
- ✓ **The 30 year infrastructure investment plan imperative did not exist at the outset**
  - The closest we will get to a mandate to put effort into adopting dTIMS

# By the industry for the industry

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Just one more time:

- ✓ IDS is a charitable organisation created by the civil engineering industry to support the industry.
- ✓ IDS looks after what you own

# So, where are we at now

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- The project remains hugely successful – it has made a difference
  - Progress has slowed down a bit over the past few years
  - It is time to put more effort in to achieve the next plateau
- Sufficiency of skilled resources is a challenge but there are initiatives in place to mitigate this
  - The IDS bureau, and
  - IDS work to develop modelling skills

# So, where are we at now

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- We are in a good position to give real effect to ONRC and the 30 year infrastructure plan expectation
- IDS has plans to expand the range of assets covered by the modelling, and achieve cross asset optimisation capability
- The industry needs to be supporting this next tranche of developments and actively engaging with IDS to steer the development path

# Thanks



- The project has a core team, everybody contributed to its development
- Many people have been involved
- We are very grateful to everybody who has contributed

# Thanks

*Thanks to:*

- Zak Morete who created the motivating challenge
- The late Brian McCombe for helping put together the FWP methodology
- Jeremy Hughes for turning that methodology into a functional software solution
- Rick van Barneveld for trusting us enough to allow NOMAD and dTIMS to progress by removing barriers and then supporting progress
- Mark Gordon and Ian Marshall under who's leadership RIMS took on the challenge in a pragmatic manner. Things would have been a lot different without that pragmatism.
- The RIMS group of that era for hanging in there over the 6 year development period



# Thanks

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*Thanks to:*

- Dr Theuns Henning for deciding that coming to NZ to help us out was a good idea
- Tony Porter for his enthusiastic support and helping establish dTAG
- Rick Deighton for helping us turn some of our good ideas into software solutions
- Vicki Deighton for supporting the New Zealand initiative for 20 years
- dTAG and all of its subsequent forms for steering the technical developments
- All of the IDS chairs for their leadership – especially Neil (back for a second round)
- Ross Waugh for his support and keeping us on track with the strategic imperative
- All of the early start RCA's for providing the reason to carry on

# My thanks

And a special thanks from me for enabling me  
to fulfil my vision

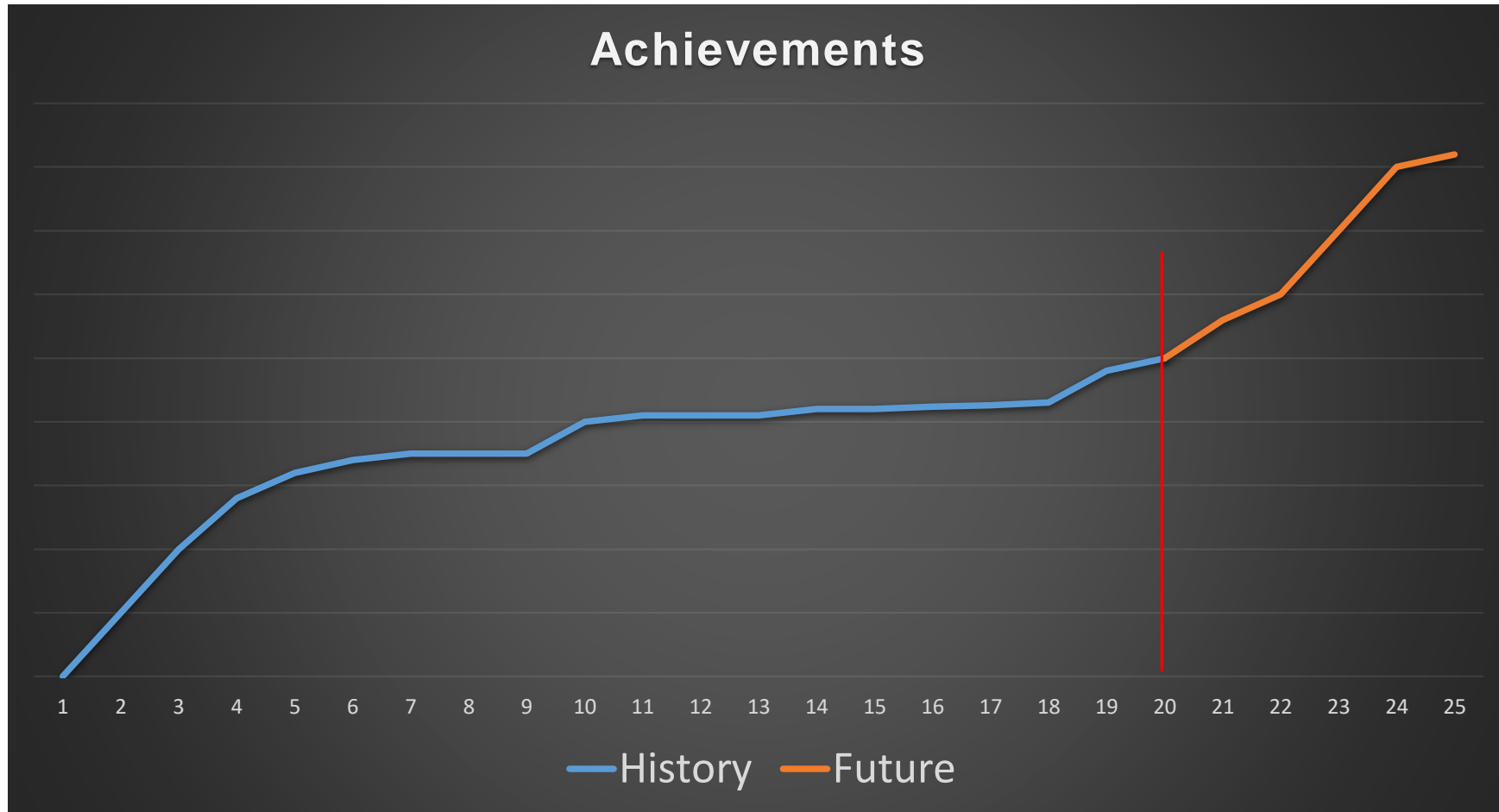


# Casting a vision for the future

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- **Strengthen outcome reporting**
  - Telling simple compelling stories pitched at the right level
  - How do we know its right
- **More effective engagement with TLA's**
  - Recapture the power in numbers – focussed effort
- **Placing a greater value on what we have**
- **Consequences for delivering sub optimal infrastructure long term plans would help a lot**
- **And on the technical front**
  - Expand the suite of assets covered
  - Cross asset optimisation

# Rate of change – growth of intellectual capability



# Thanks

