



Sydney Trains

Visualising rail assets for optimised asset management

Client

Sydney Trains

Vitals

- The operator of the suburban passenger rail network of Sydney, Australia
- 170 stations over eight lines
- Covers over 505 miles of track

Challenges

Transition to a new corporate EAM system.

Results

The ability to display multiple future asset scenarios.

Background

As part of Sydney Trains' (ST) transition to a new corporate EAM system, it identified a need for advanced decision analytics that could optimise their asset management outcomes in terms of cost, risk and performance.

In order to select and prioritise annual works programs ST wanted a multi-variant, model-based analysis to identify the best asset management outcome. This analysis required the balancing of:

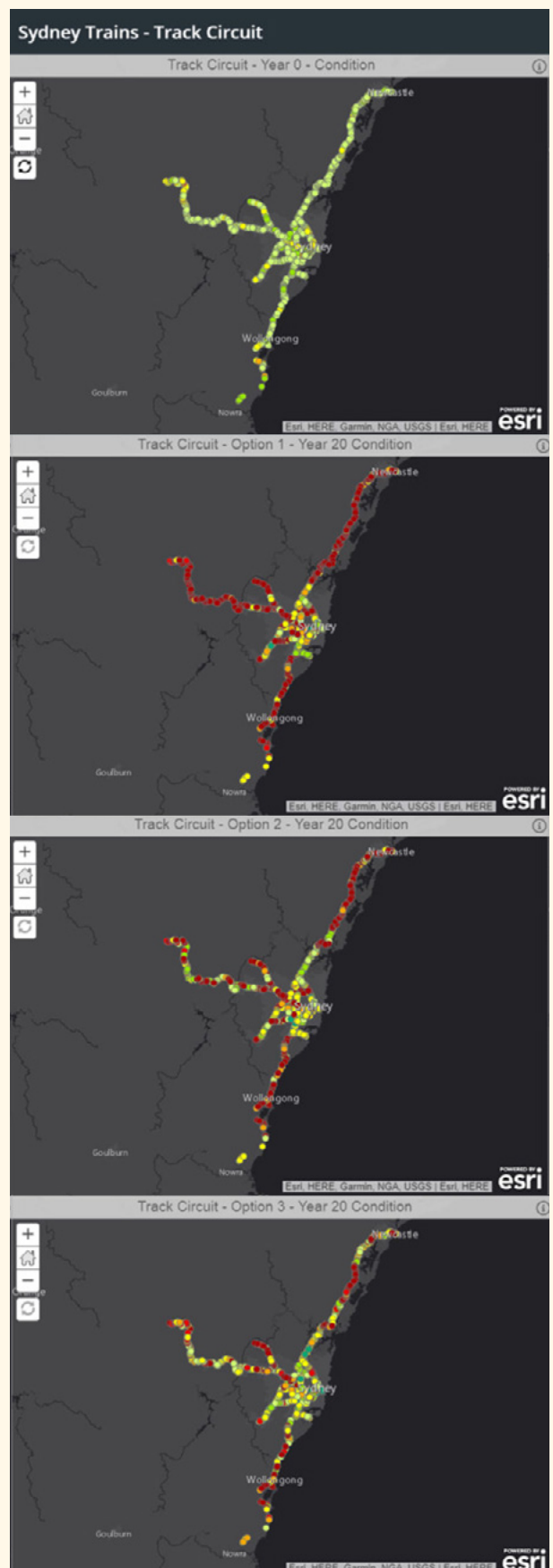
- Asset Condition vs
- Asset Criticality vs
- Risk vs
- Time + Cost for Maintenance vs
- Resources vs
- Access or Availability of assets for Maintenance

Brightly Involvement

Brightly delivered the project using the established methodology of 'Diagnose - Construct and Calibrate - Outputs', across the following five steps:

1. Collated data based on generational assessment criteria and data availability
2. The model development workshop established when, why, how, and where ST wanted to intervene as part of their renewal strategy
3. Brightly detailed remaining data requirements to ST, to ensure the model is completed in a way that delivered all required outputs
4. Model calibration involved collaboration with key ST stakeholders to confirm that data, intervention points, prioritisation and finalised work program was correct and in line with ST's renewal strategy
5. Assets handed over all outputs; visualisations of ST's strategy and scenario alternatives using Esri online story maps was integral in communicating the strategic asset management outcomes to decision makers at ST

Powerful visualisations of various decision-making scenarios was integral to senior stakeholder engagement



Outputs

The ability to display multiple future asset scenarios on spatial layers enabled powerful senior stakeholder engagement, and was integral to overall project success.

The project outputs fed directly into key corporate documentation, including:

- Strategic Asset Management Plan (SAMP)
- Asset Maintenance Plans (AMP)
- Annual Work Program (AWP)

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The outcomes of our work with Brightly have enabled us to achieve some important high-level business objectives. We have various works program scenarios and what-if analyses considering asset condition, criticality, degradation and location.

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Grant Burton
General Manager Asset Management

