

Exploring a new approach to urban inspections

Urban light rail and metro systems operate in some of the most demanding environments in rail.

They are:

- Critical to connecting people across cities
- Highly visible, safety critical and politically sensitive
- Running frequent services with limited access windows
- Operating under increasing compliance and assurance expectations
- At the same time, inspection and maintenance approaches have changed very little.

The direction of travel Globally, industry bodies and operators are pushing towards:

- + Condition based and predictive maintenance
- + Better digital records for compliance and audit
- + Earlier identification of developing issues
- + Fewer manual interventions where possible

But for many urban networks, the practical path from today to that future is not always clear.

The reality today Across many networks:

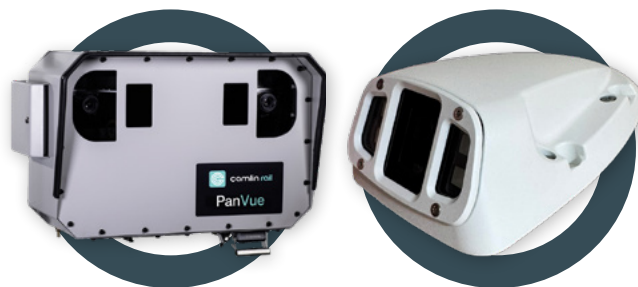
- + Infrastructure and rolling stock inspections are still largely periodic
- + Specialist surveys are often subcontracted and expensive
- + Issues with pantographs and overhead line equipment are typically assessed separately
- + Insight between inspections is limited
- + Manual inspection at height remains a safety and resourcing challenge

This creates a familiar tension:

Keeping services reliable and safe, while controlling cost, risk and disruption.



What if the pantograph and catenary could be monitored together, continuously, during normal service?



Introducing an early concept:

PanVue Urban

PanVue Urban is an idea we are exploring for inner city metro and light rail systems.

The concept combines:

- ↘ Fleet wide pantograph condition monitoring
- ↘ Continuous assessment of overhead line interaction
- ↘ A single view of how vehicle and infrastructure conditions affect each other

The aim is not to replace existing standards or inspection regimes, but to complement them with better day to day visibility and data-driven insights.

Why this could matter

If viable, this approach could help operators:

- + Identify emerging issues earlier
- + Reduce reliance on infrequent, high cost surveys
- + Improve safety by reducing the need for manual inspection at height
- + Support more informed maintenance and investment decisions
- + Build a clearer digital record of asset condition over time

This is not a product launch

- + We are at an early stage.
- + Before investing further, we want to sense check whether this problem resonates and whether the concept would genuinely add value in the real world.

We would value your perspective (embed survey)

1 Is this a challenge you recognise in your network?

Yes

No

2 Where would this approach help, and where would it fall short?

3 What barriers would prevent adoption?

Resource

Suitable infrastructure

Cost

Other

4 Would you be open to a short conversation to explore this further?

Yes

No

Our aim is to learn, not to sell.

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