



*A short reflection on Flatland (1884), infrastructure, dimensions, and why the next wave of systems in our sector won't be 2D, 3D or even 4D, but **reflexive**.*

On the red-eye from Changi back to Clark last Thursday, as the plane climbed and Singapore's myriad real assets resolved themselves into one big interconnected system, I found myself thinking about an old favourite book: Flatland — Edwin Abbott's 1884 masterpiece about geometric beings who live happily in two dimensions until a visiting sphere disrupts everything they thought they understood.

The upheaval in Flatland wasn't the geometry; it was the imagination required to see a new dimension.

In infrastructure and finance, I think many still live in Flatland.

Real assets — and the money behind them — are managed with legacy systems producing static outputs: dashboards, PDFs, emailed spreadsheets (“hey — can someone send me the latest model?”). Meanwhile, the assets themselves exist in four dimensions. They move through development, construction, operations, weather, traffic, degradation, recovery. They behave.

Then along comes AI — the equivalent of a sphere walking into a 2-D pub — and everyone starts shouting:

“Why is that circle changing size!?”

“What happened to my old spreadsheet!?”

“Is this even allowed!?”

Workflows are changing, but most institutions are still stuck in 2-D thinking, with a few random AI tools appearing at the edges. What's really coming is an entire new reflexive layer — systems that learn, coordinate legacy tools dynamically, and bring to life all the dimensions of our data, analytics, operations, and governance.

When that happens, infrastructure will finally be able to do what it exists to do: deliver public services better.

Every now and then, I catch a glimpse of a vague shape — a system that knows it is a system.

Feels like something is coming.... is anyone else seeing the same shapes?

Joe Lufkin, 22 Nov 2025

