



**Optimizing GeoAI and Network Digital
Twin for Utilities & Telecom Networks**

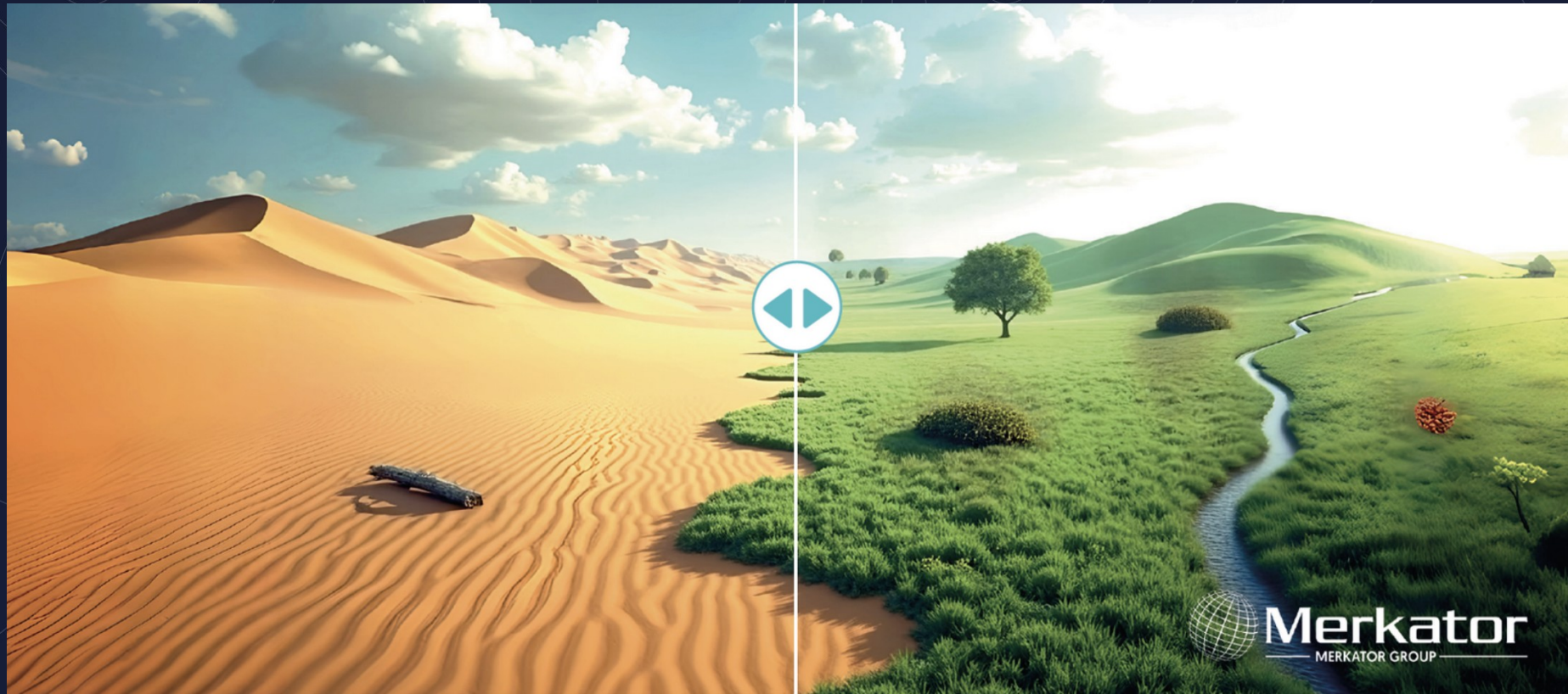


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Geert De Coensel

April 28th 2026

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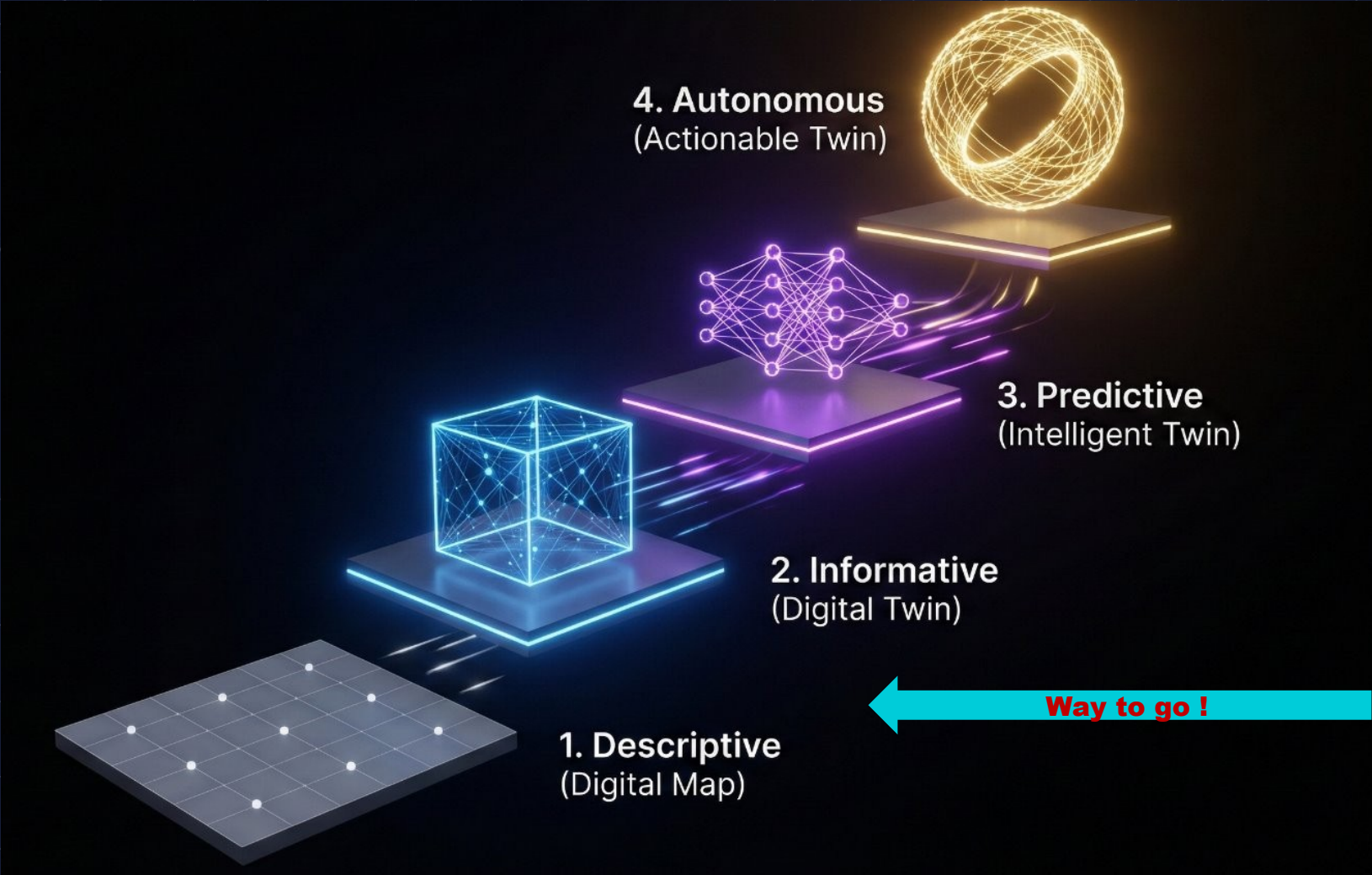
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Digital Twin – where is the market today?

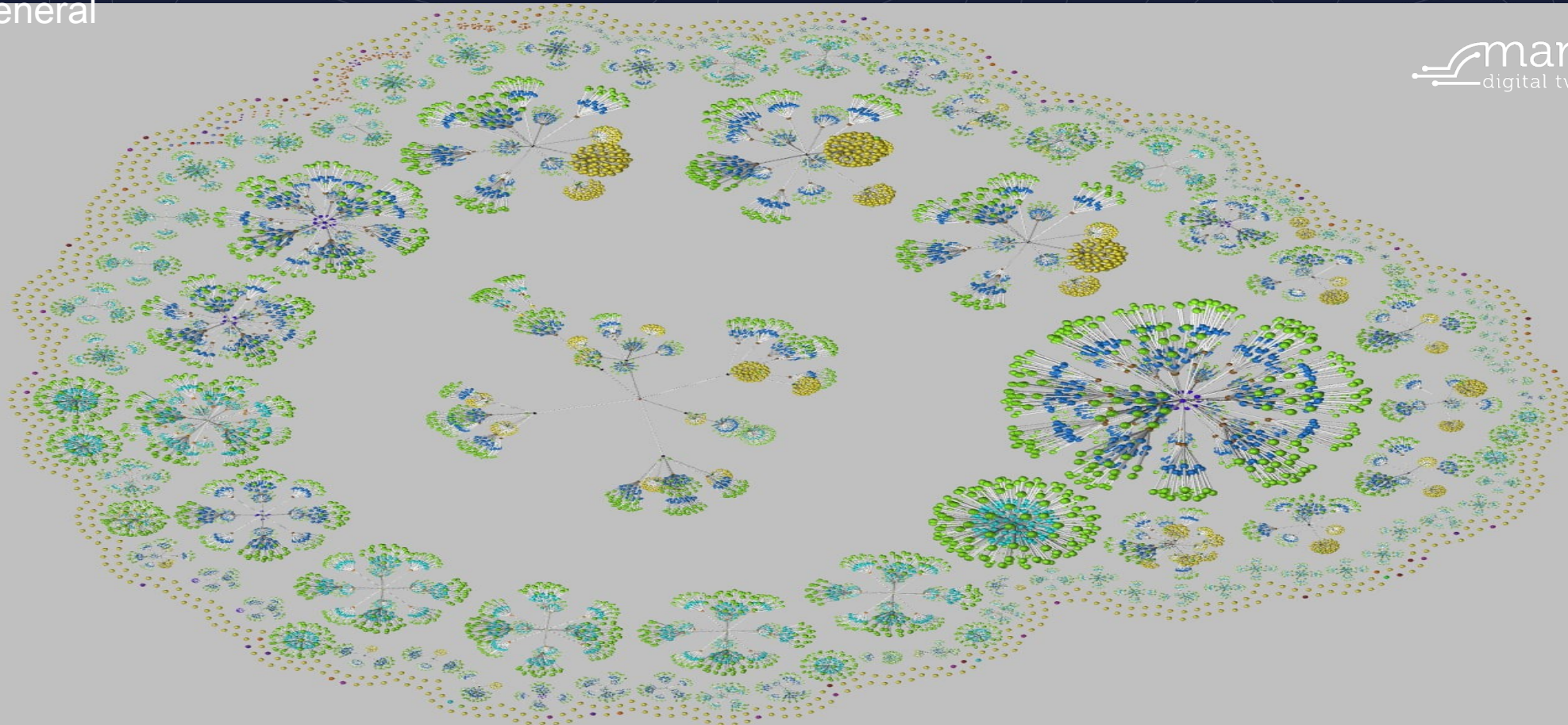


AI of course ...but much more

- We all live in very **turbulent** times where tomorrow is unpredictable
- World economy heavily influenced by **AI-trends** & several external risks
 - **AI** and **AI Agents** will take over everything...also jobs including ours ?
 - **IT & AI dominate** the world economy...
 - Microsoft, Apple, Alphabet, Amazon, Meta, Oracle, Nvidia
 - All of them are in the top 15 of biggest Companies (*by market cap*)
- **Triple S impact**
 - **Sustainability** stays very much on our radar
 - **Security** risks continue to rise
 - **Sovereignty** becomes a key decision element in an evolving Geopolitical context

AI ? Artistic Intelligence : All business logic (MarlinDT datamodel - partial)

- AI is everywhere for everyone
- Where do we leave the Human: creativity, ethical reasoning and judgement, leadership and EQ in general



Our Digital Twin challenge in Telecom (and more)

1. **Fragmented** Inventories sometimes 20-30 years of piling up
2. Very Low Trust in **Data**
3. Design \neq As-built \neq Operations
4. **Spreadsheets** XLS are our primary competitor



Inventory systems don't usually fail technically, rather the DATA drifts fast and faster away from reality.

When trust is lost, teams compensate with spreadsheets, local fixes, and manual checks.

3D – 4D – 5D – 6D, that's the question

1. 90% of what we model is **not visible**
2. For 80% of the visualization use cases it makes no sense to visualize connectivity in 3D
3. **Historical** data:
 - past, current & future information is crucial



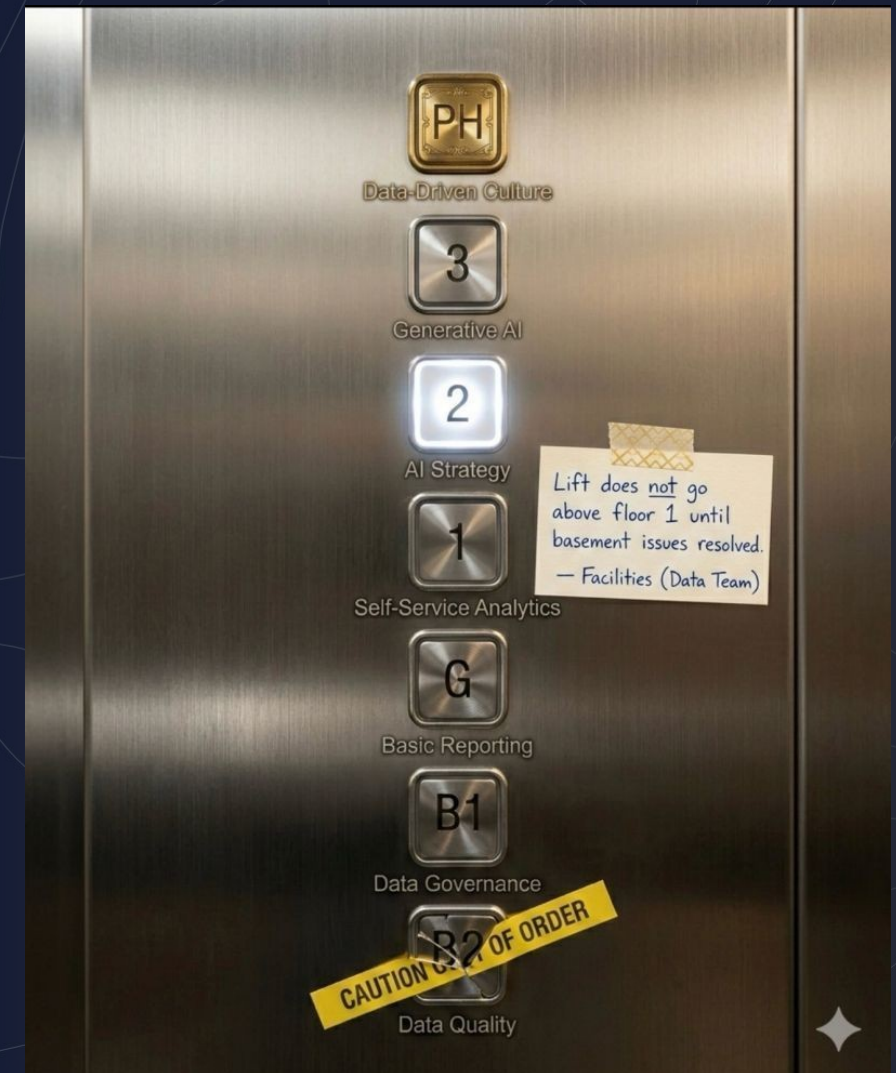
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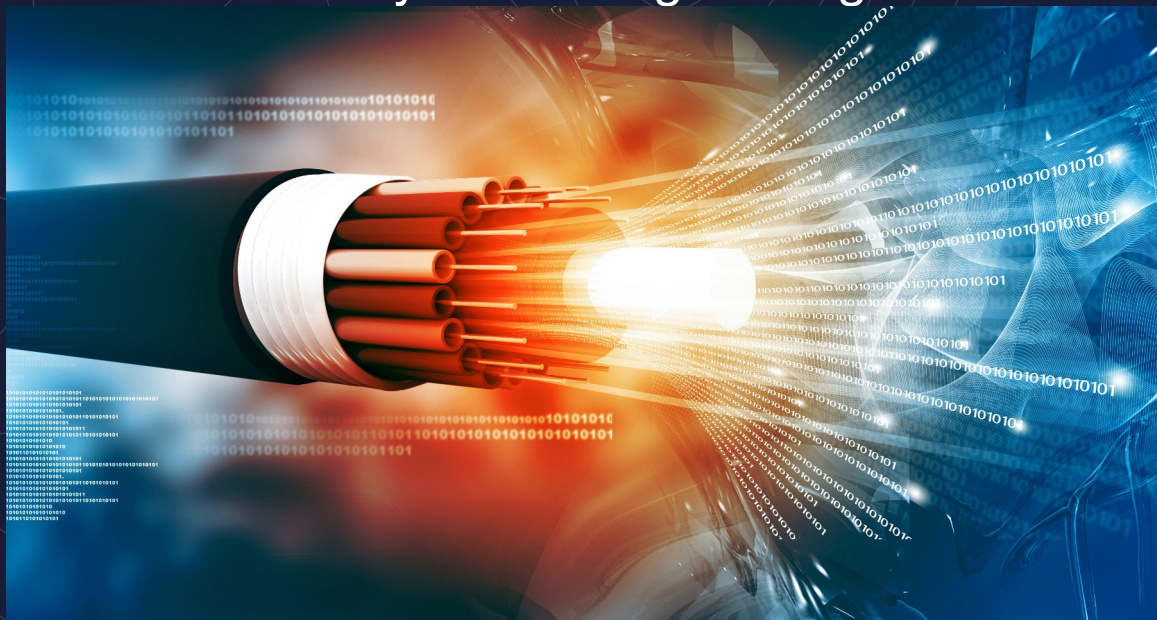
Why “Better Tools” Alone Don’t Fix It

- AI on Bad Data ≠ Bad Idea
- Run for more accurate & current data
- Static Inventories versus Living Networks
- Yes, Humans in the loop assisted by AI

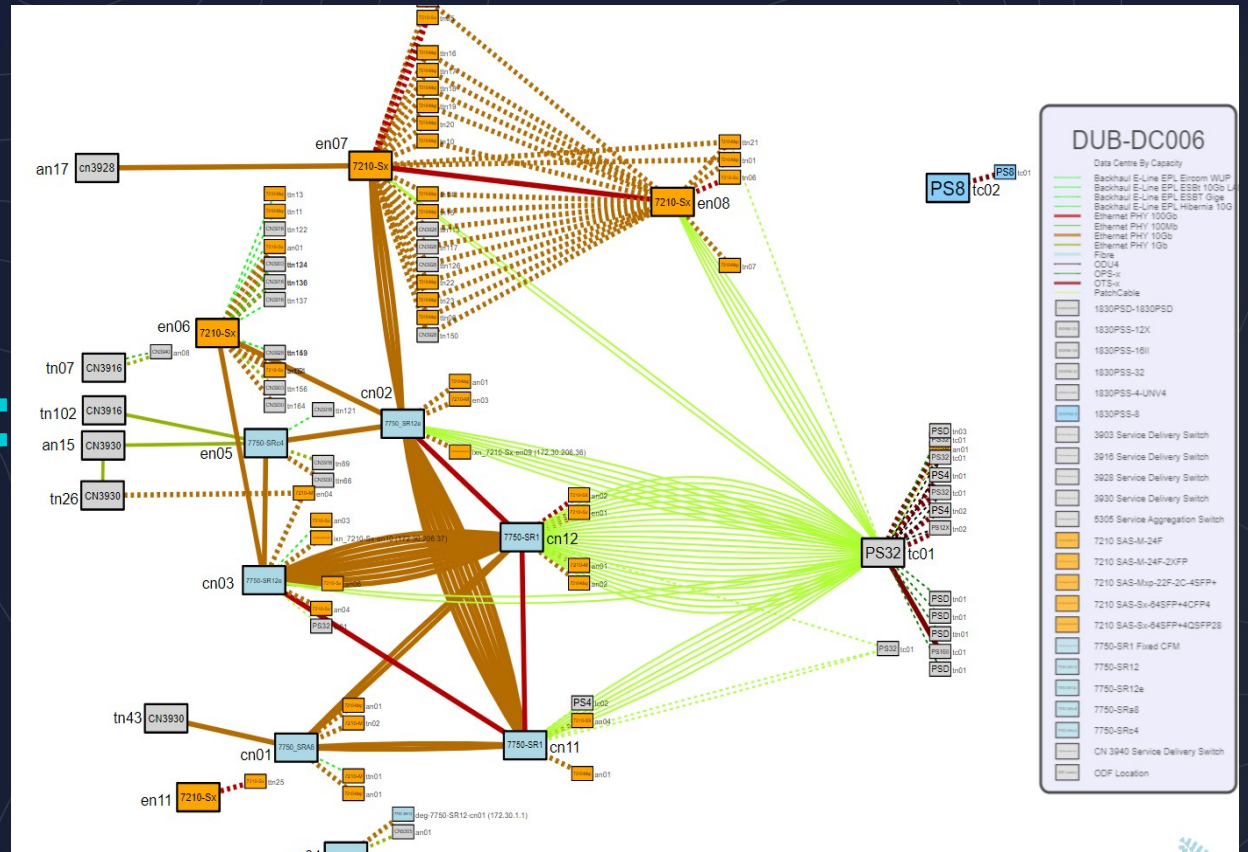
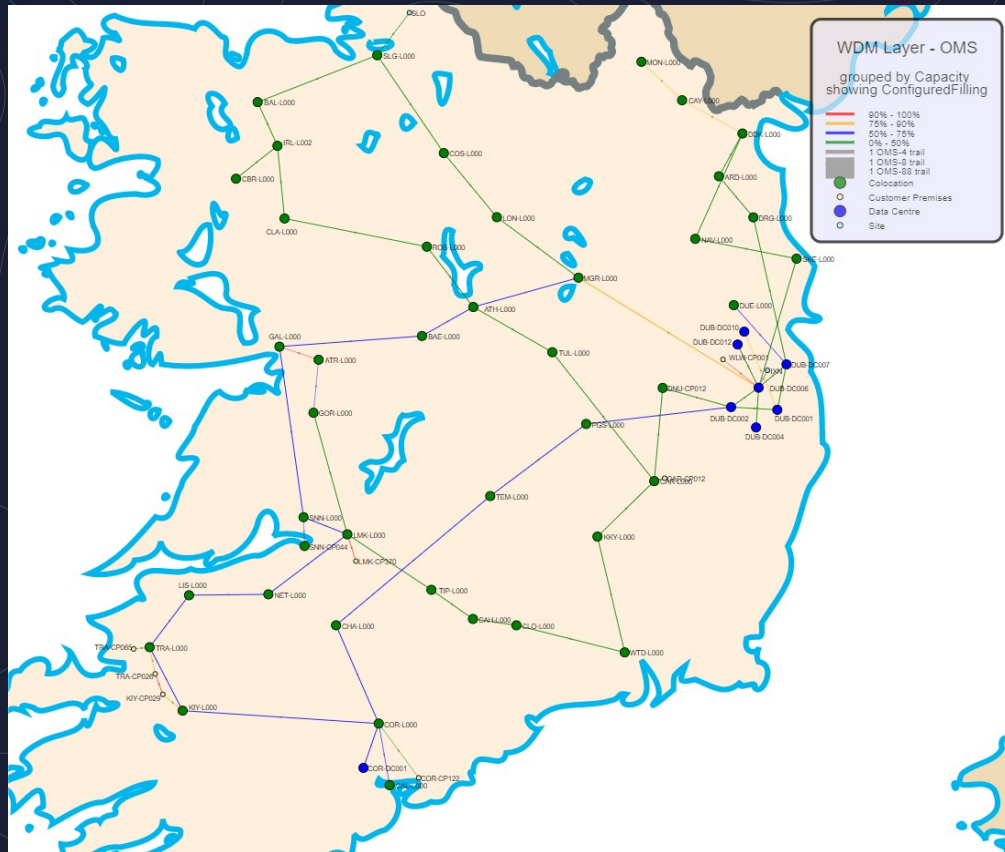


No DT without...Logical Network Probing

- Very much beyond GIS but necessary for DT ✓
- Multi-Vendor Discovery ✓
- Who is on those light paths ✓
- Real-time Physical ↔ Logical Alignment ✓



True Digital Twin – Real time network generation



Critical Infrastructure matters... 28/04/2025



**55M people
impacted**

Key Digital Twin Telecom References



More great confidence seen!



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