



**Upstream leakage:
What data validation is required and what
are the challenges around data?**



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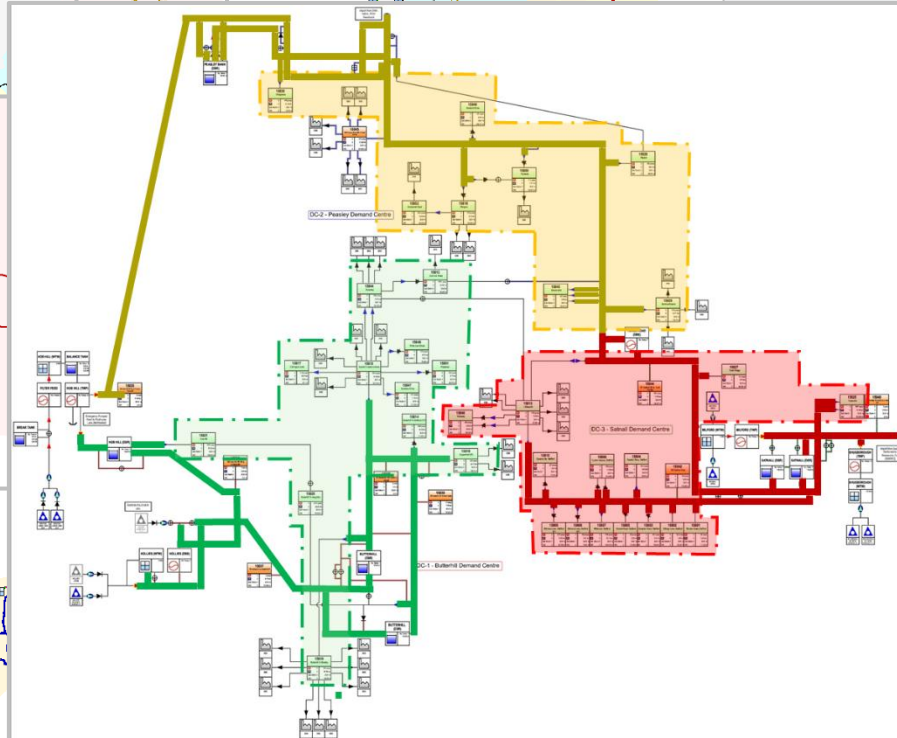
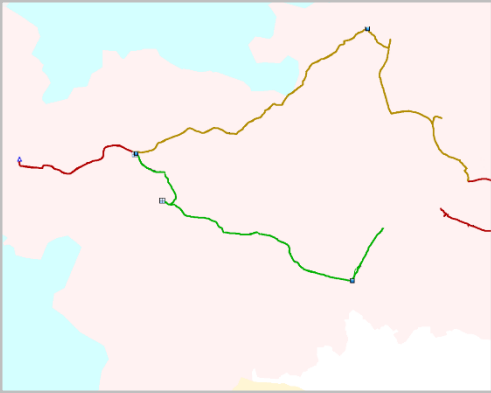
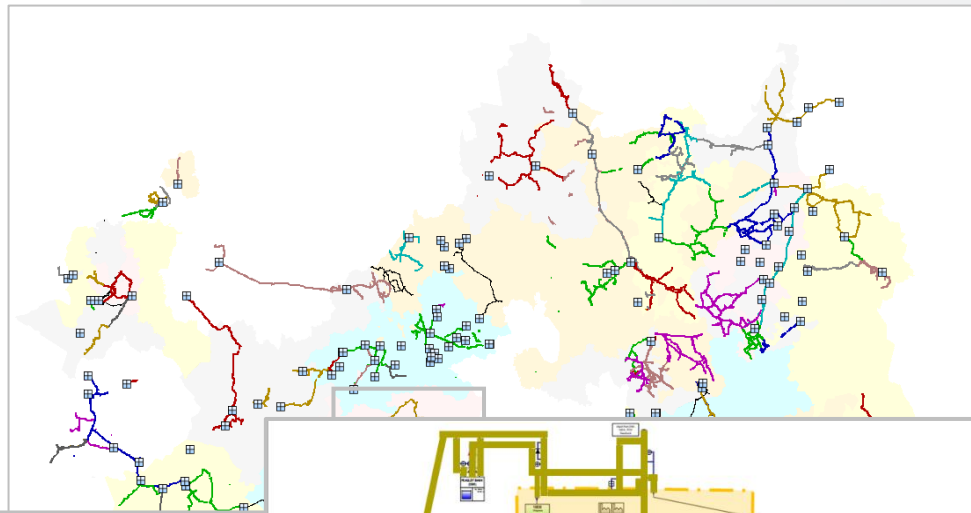
Validating the Upstream Network's Assets, Connectivity and Demand

Process

- To produce flow balances, the upstream network containing the trunk main and service reservoirs, needs defining and validating.
- GIS data can be analysed to create a schematic to act as a focal point for this.

Challenges

- Missing assets such as cross connections, valves and meters
- The presence of 'ghost' assets
- The status fields on assets being incorrect
- Assets are shown in the wrong direction



Tile Definition

Process

- With the schematics created, the tiles can be defined.
- Each one will include inlet supply meter(s), and a combination of the following:
 - outlet supply meter(s)
 - district metered offtakes
 - demand offtakes
 - service reservoirs
 - large metered users
 - closed valves

Challenges

- Missing or anomalous telemetry data for meters and tanks
- Mismatches in referencing or naming between systems
- Operational changes to network to meet supply demand needs

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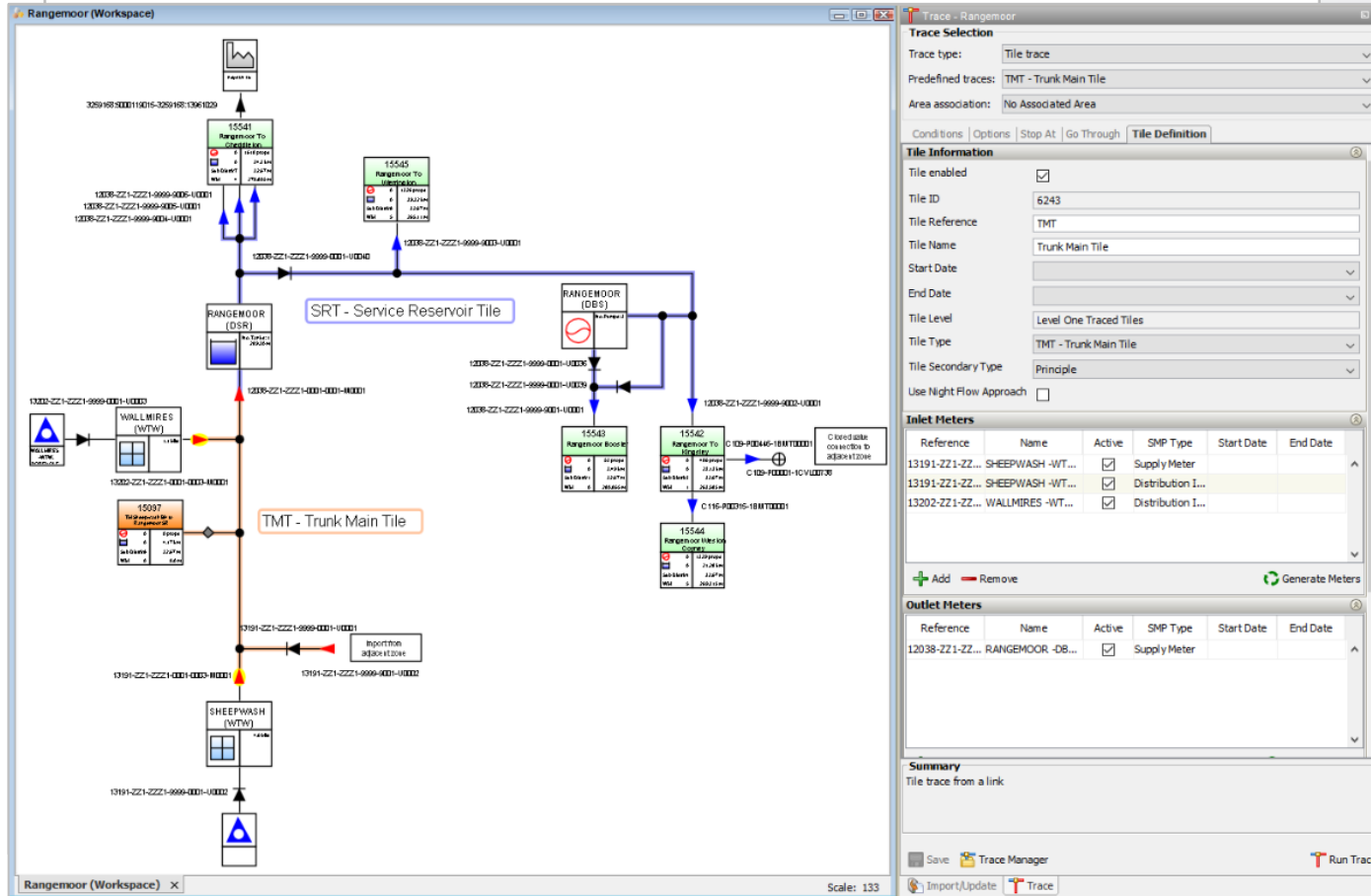
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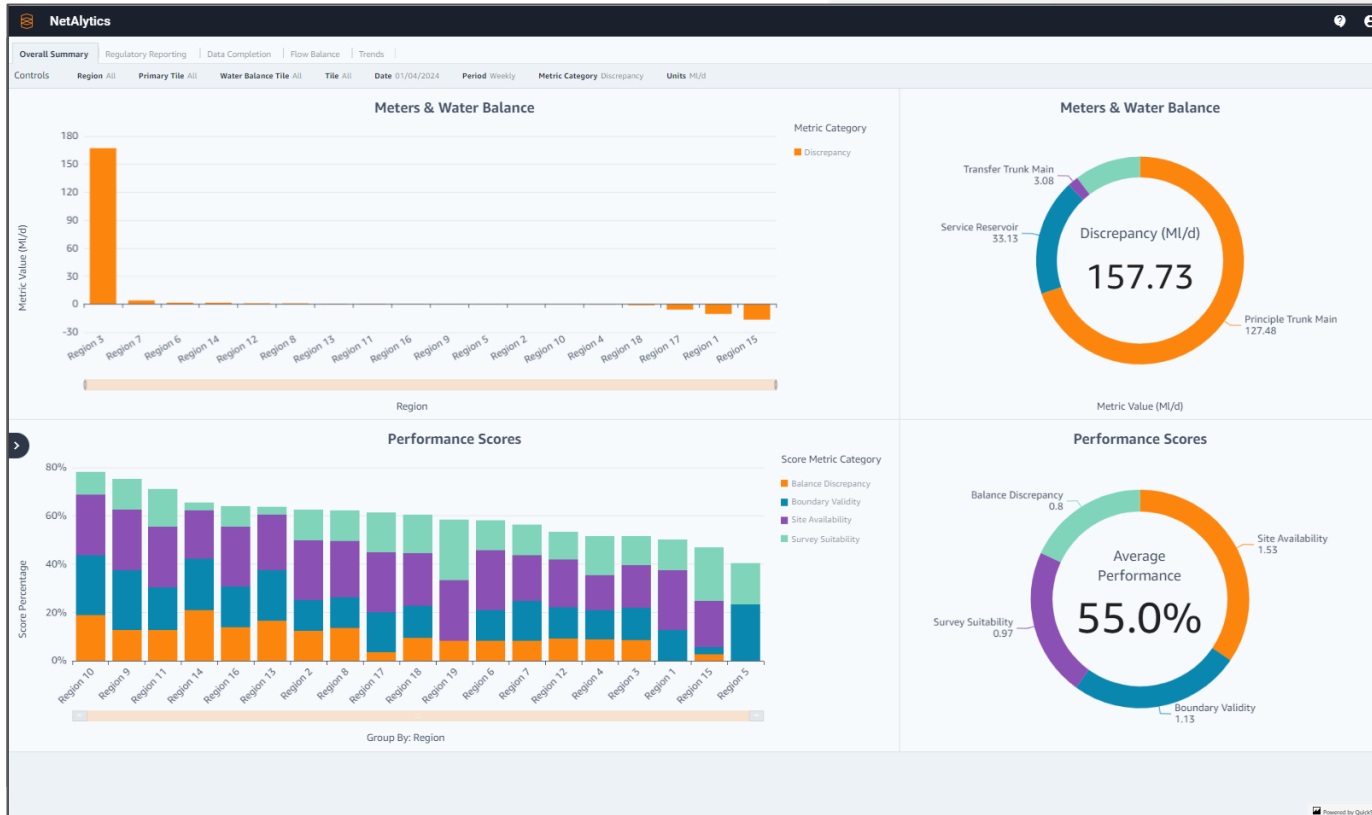
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Tile Balances & Scores

Process

- Using a flow balance approach, discrepancies can be produced between the supply flows and demand offtakes, also including any change in storage within service reservoirs that are part of the tile.
- An operable / non-operable status can be applied to the discrepancy by calculating key score metrics.
- A high score is representative of an operable status and indicates that the tile discrepancy can be targeted for detection and repair and put in the context for further analyses and regulatory reporting.



NetOps
Upstream

NetAnalytics
Dashboards

Cyclical Validation of
Tile Discrepancies

The cycle is a management approach applicable throughout the reporting year:

- Will be a long-term 'business as usual' commitment
- Will require improved data, technologies and processes, and competently trained people
- Will need operational and capital investment e.g. replace or install meters, resolve boundary issues and investigate anomalies

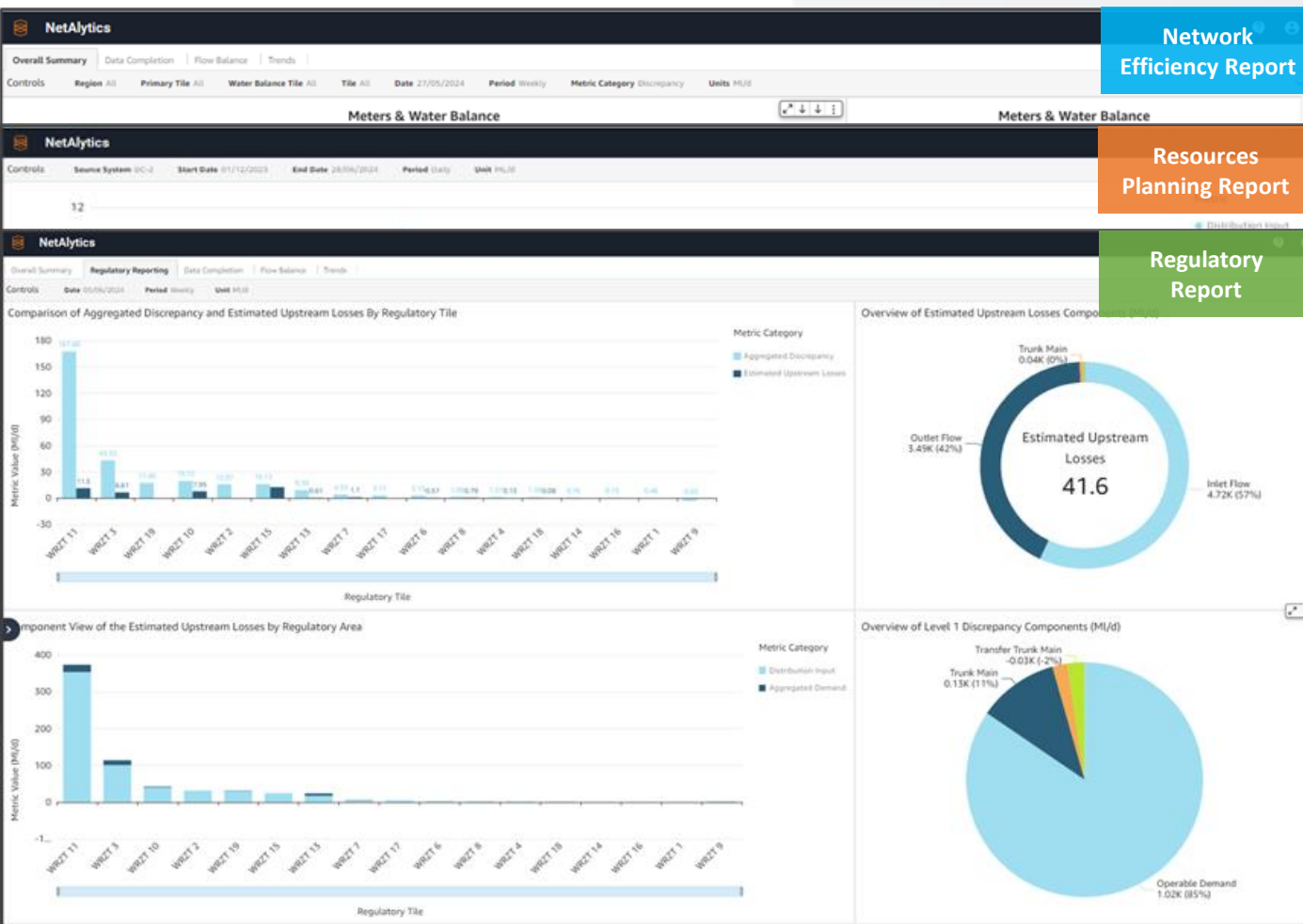
The cycle of validation:

- Will incrementally improve the upstream data set
- Will improve the performance of the network
- Provides a better basis for estimating of trunk main and service reservoir A at the end of the reporting year.

Network
Efficiency Report

Resources
Planning Report

Regulatory
Report





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MONDAY 2 DECEMBER 2024
TUESDAY 3 DECEMBER 2024

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