



Condition Based Risk Management (CBRM) Rebuild with SQL DB

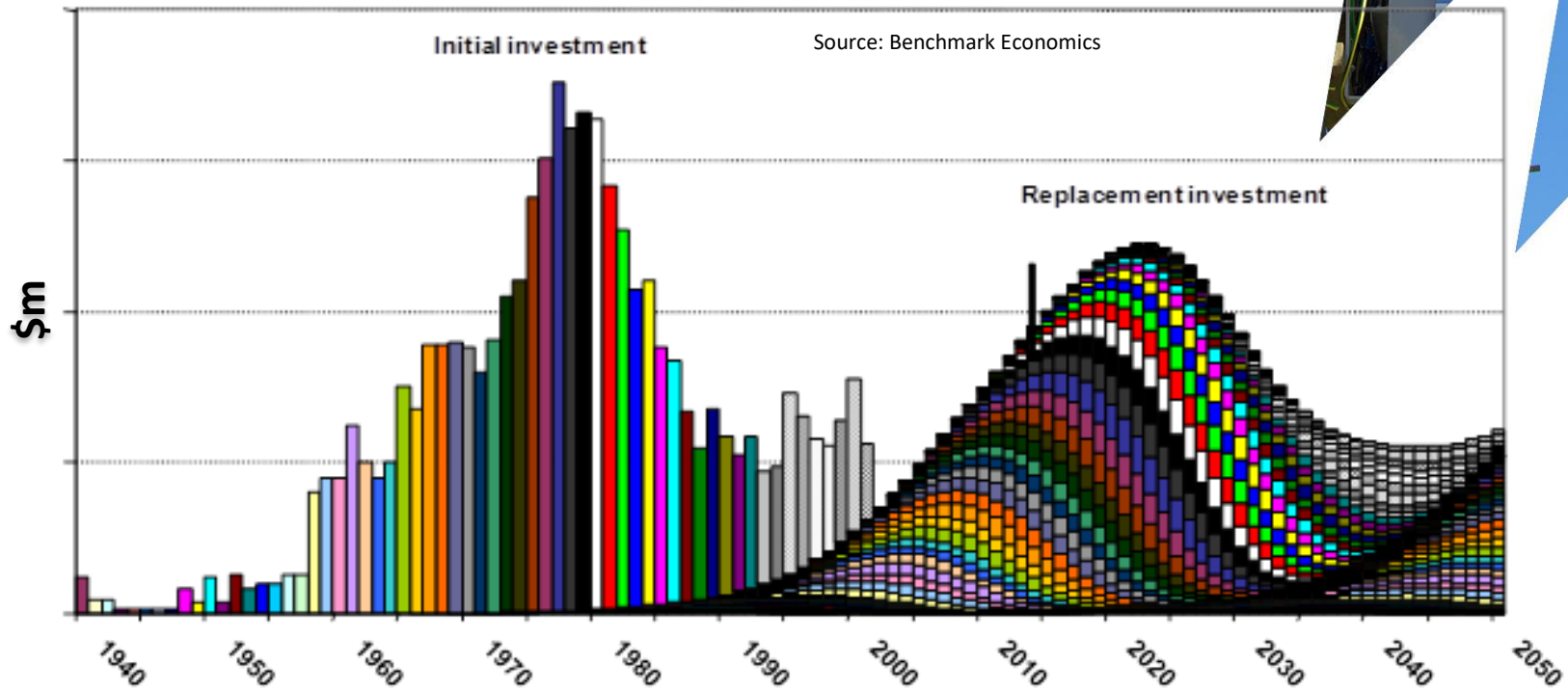
2022 Asset Information Manager's Forum

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CBRM METHODOLOGY

CBRM TO ADDRESS THE WALL OF WIRE

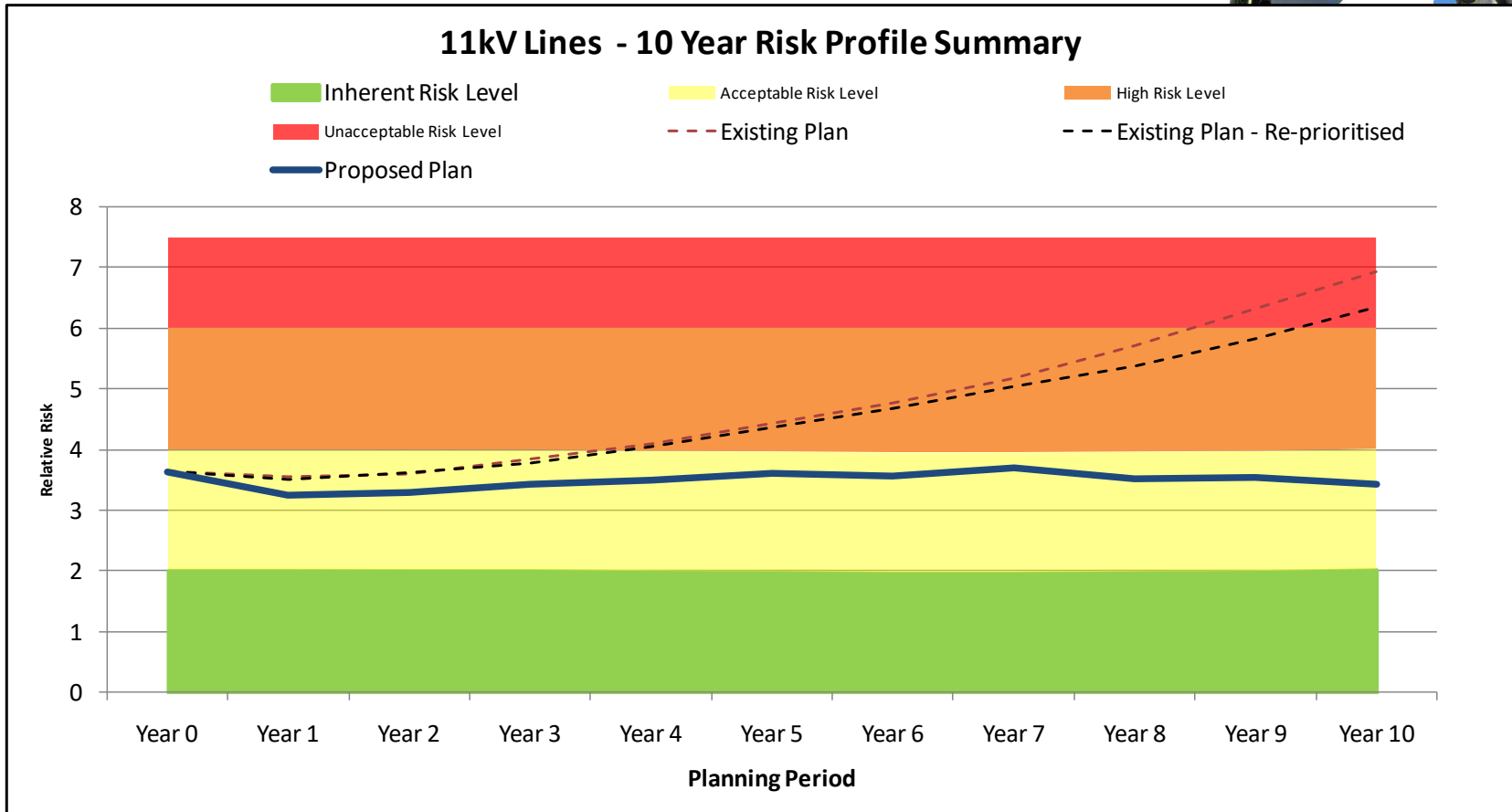


- CBRM was originally developed by EA Technology, accepted by OFGEM, every HV distribution asset in the UK has been put through CNAIM (CBRM) modelling since 2016;
- Completed CBRM models for 11kV Lines and RMU in 2013
- Completed all other asset classes in a stage approach (15 asset classes)



CBRM METHODOLOGY

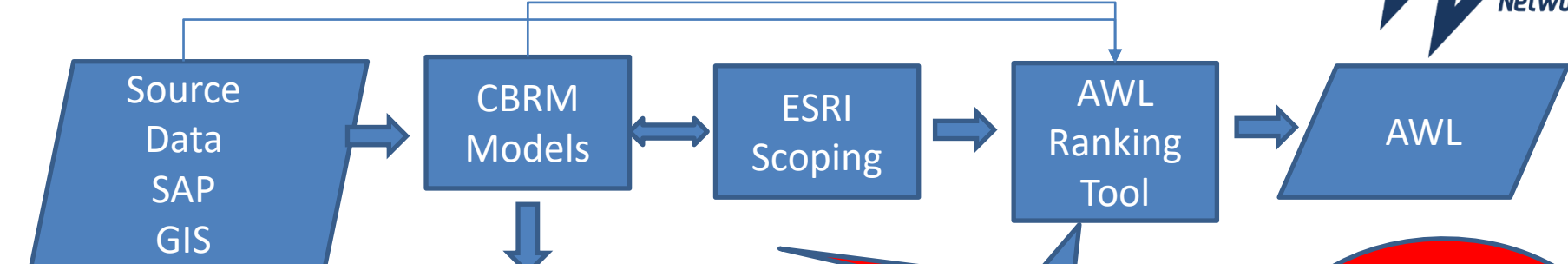
11KV LINES – 10 YEAR RISK PROFILE SUMMARY



- The proposed \$2.3M average increase per annum will maintain the risk level within an acceptable level
- WEL's implementation of CBRM was tested and approved by CEO and the Board;

BUSINESS ISSUES (CBRM&AWL)

CP2



Asset Class	EXCEL Files
Poles	114MB
Crossarm-HV	75MB
OH Lines-HV	25MB
Distribution Transformer	20MB
Pillars	94MB
...	
15 Classes	???

90MB EXCEL File

We need a better solution – Data Platform

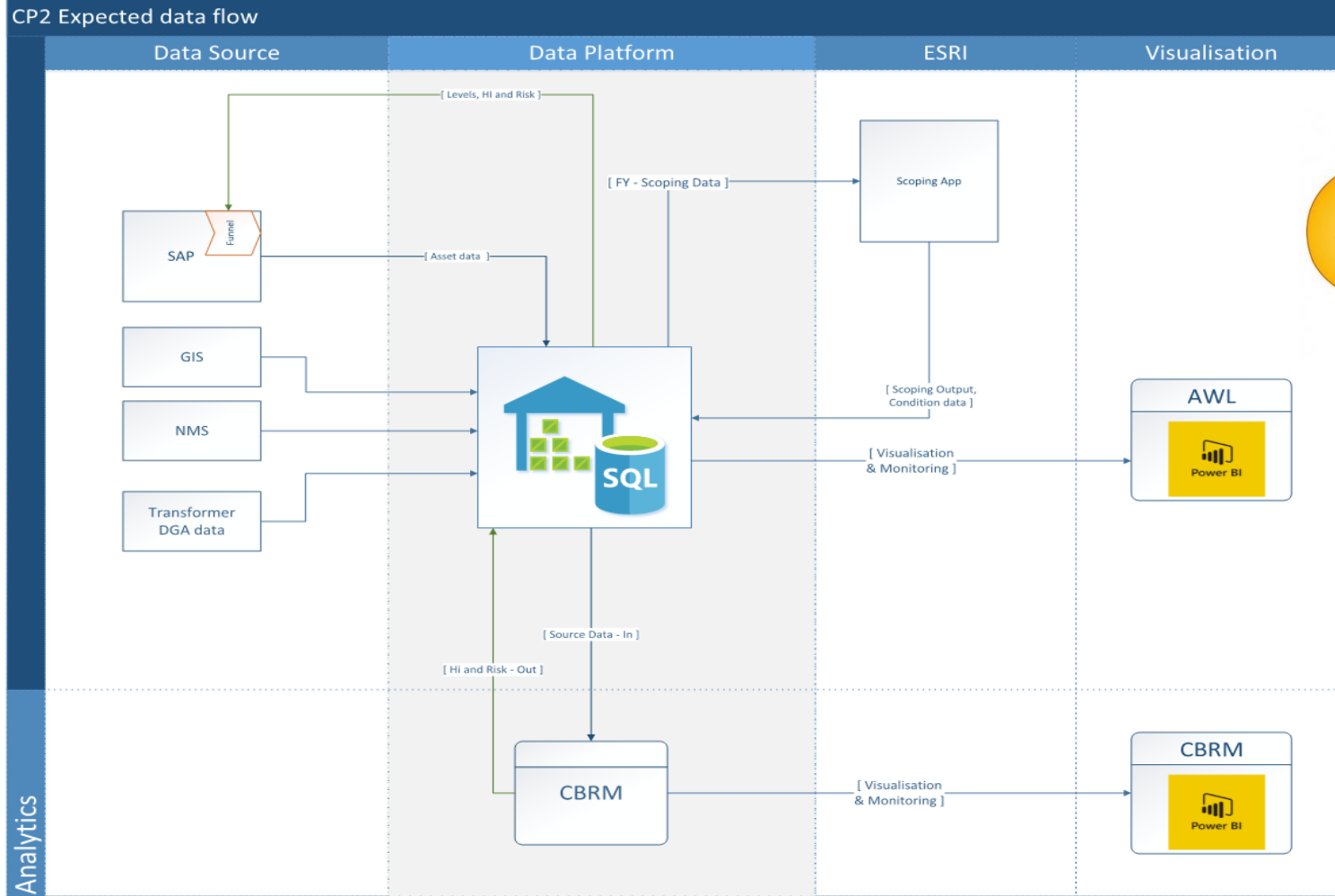


- The spreadsheet is too large to run
- Significant resource requirements
- Input data is unable to be verified across different systems
- The output data from CBRM for AWL might be out of date
- Unable to demonstrate the appropriateness of decisions made in a transparent way
- Unable to review the risks and optimise the decisions on feeder, substation or whole network level.



AGREED APPROACH

CP2



Enabling our communities to thrive

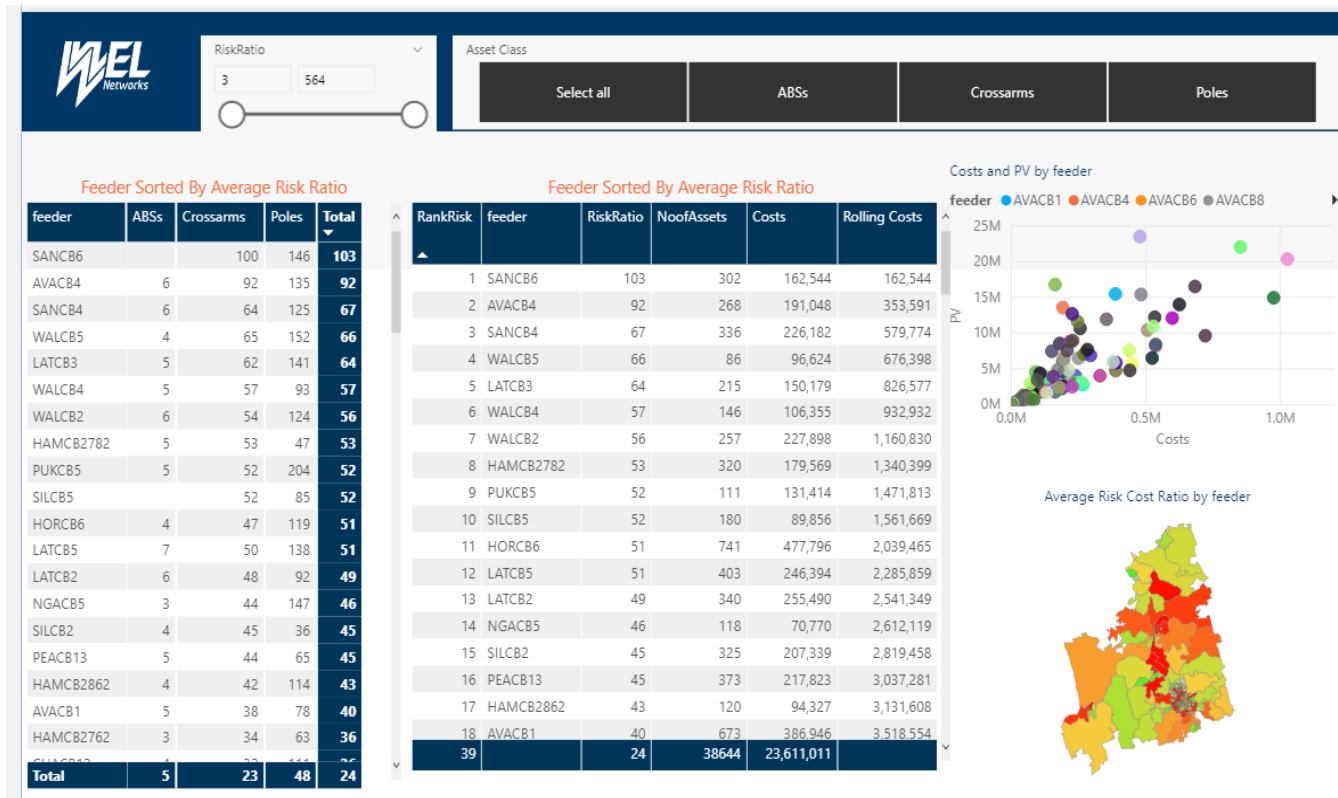


New Capability with CBRM DB Version



1. Present Value of ongoing 30 year's risk value
2. Total ownership cost including unit cost (2012 ODV Rate + 2% CPI Adjustment) and book value
3. Ratio of PV to total ownership cost
4. Optimal trade off between PV and cost
5. Aggregate by asset class, feeder, substation and GXP
 - Total ownership cost graphs
 - 30 year risk profile with and without intervention

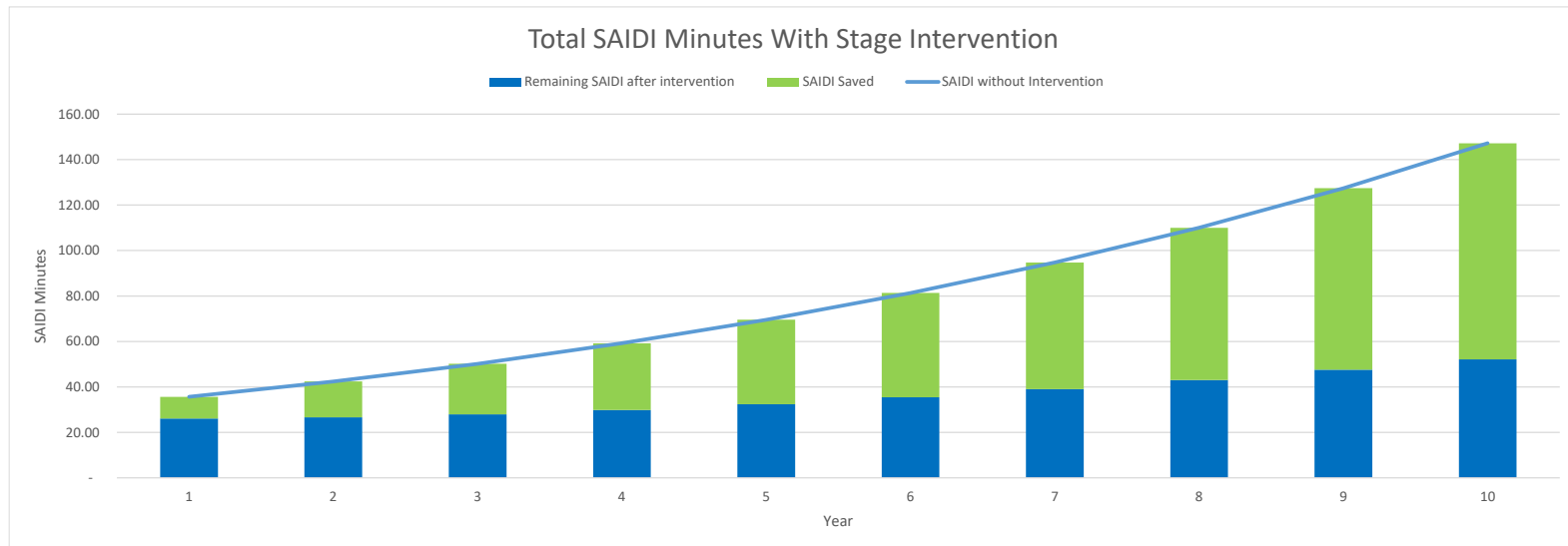
New Capability with CBRM DB Version



Enabling our communities to thrive



New Asset Renewal Strategy with New Capability



Dynamic parameter selection for scenarios planning:

- Risk Ratio;
- Budget
- Performance

