



AEMO Activity-Based Understanding Review

Financial Consultation Committee

October 2021

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Summary

We assessed the effectiveness and efficiency of AEMO's activities. The work looked at both:

- The effectiveness of AEMO's overall operating model through a series of structured workshops
- Where and how efficiently AEMO's efforts are allocated today using an activity based analysis

We compared the efficiency of different components of AEMO's activities against a range of external comparators

Approximately 2/3 of AEMO's effort and 1/2 AEMO's totex are dedicated to core/support activities. Within this:

- AEMO's core activities are, in the majority, well-directed against its mandate and costs are comparable with peers
- AEMO's support function effort is at the low end of benchmarks
- AEMO's digital "run-the-business costs" are well above comparators, in part due to legacy tech debt

The remaining 1/3 of AEMO's effort and 1/2 of AEMO's totex are dedicated to business change and implementation of market reform. A separate deep-dive module looked at how AEMO could transform it's set-up for delivering change

The review established four main recommendations

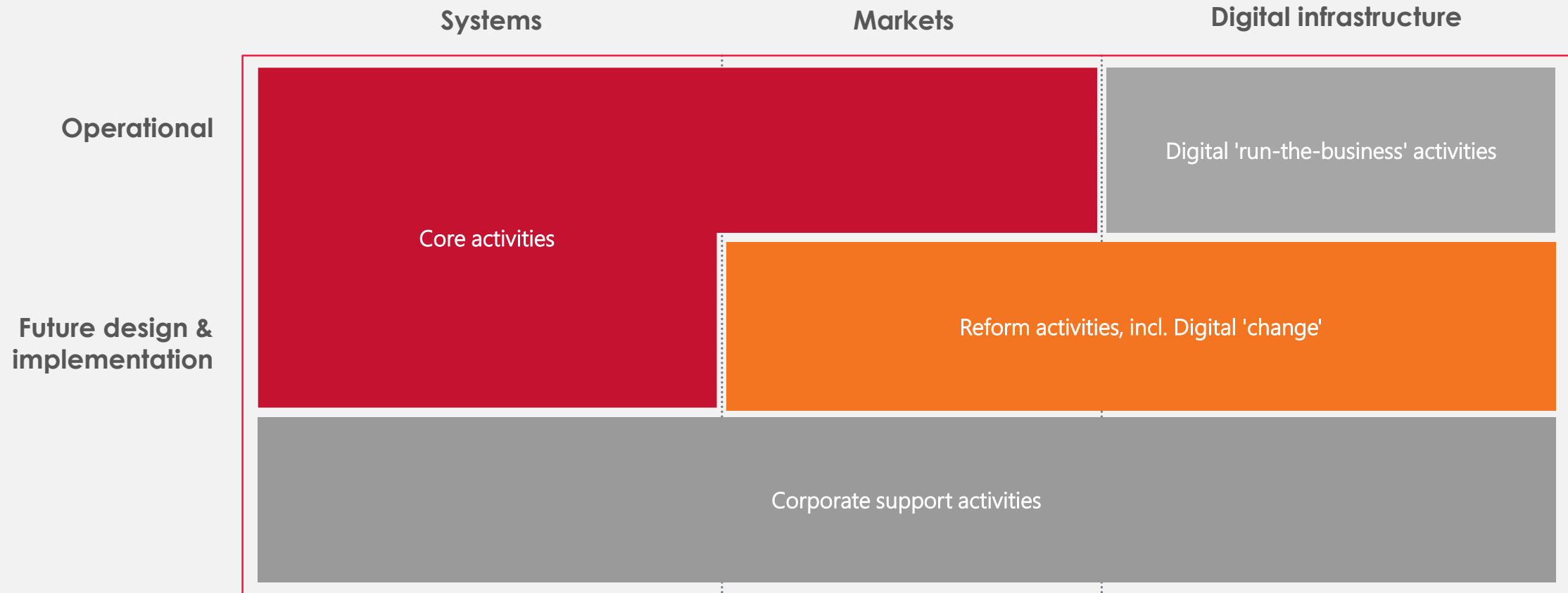
- Re-align operating model for greater clarity and accountability
- Transform the way AEMO governs, funds, and executes reform delivery
- Build the basics in corporate support functions to improve effectiveness and modernise digital 'run-the-business' activities to redeploy cost
- Invest in models/tools and rewire processes to manage increased complexity in core activities

Our review covered the breadth of AEMO activity

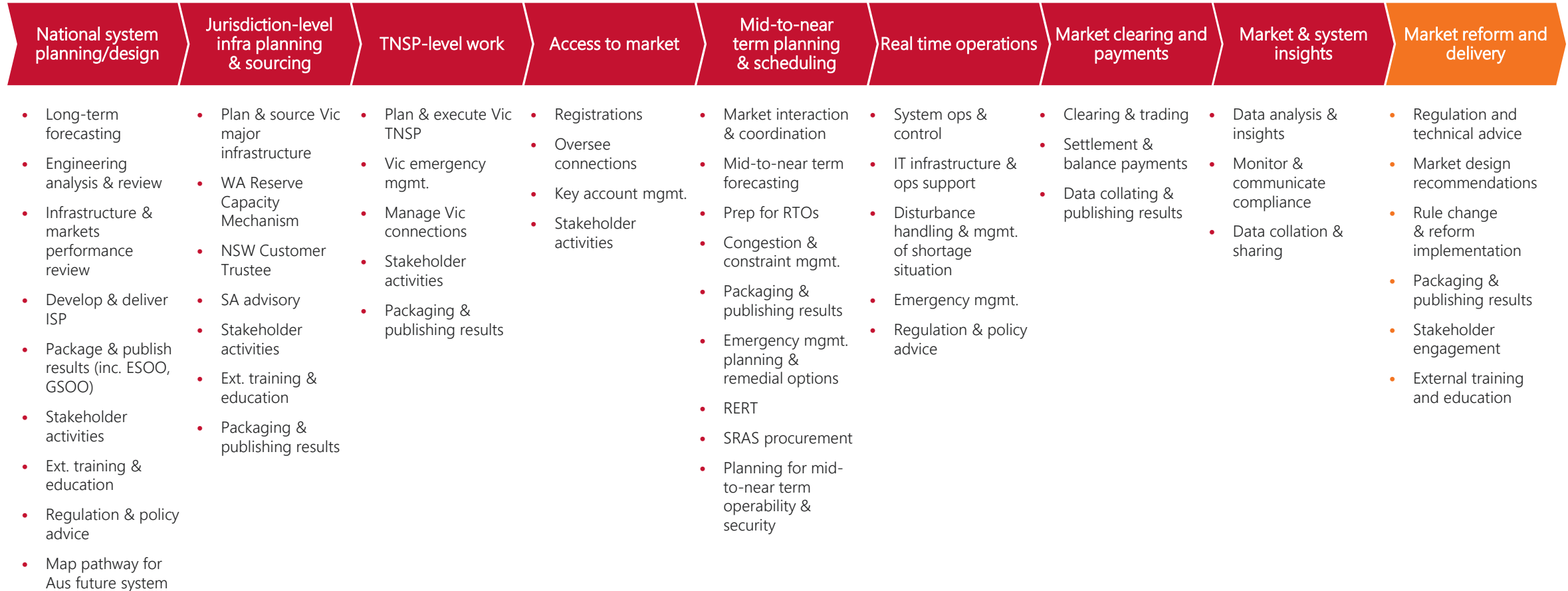
Modules of work

		Diagnostic	Comparison	Path Forward
Overall Operating Model		Operating Model – Beliefs Audit	ISO peers and other organisations	Iterative ELT Design Workshops
Core Activities	Activity Breakdown Structure	Activity-Based Understanding Survey-based assessment of AEMO's effort /pain-points by activity	ISO accounts/FERC submissions (UK, North America)	Solution workshops with ABU survey respondents
Support Functions			"Excellence in Support Functions" Benchmark (Utilities <5k employees)	
			Gartner IT benchmarks (Utilities, Financial institutions)	
Reform Delivery/Change			"Outside-In" Digital Transformation Set-up Assessment	

We follow a simplified framework for AEMO activities



Back-up: With a detailed breakdown of core activities



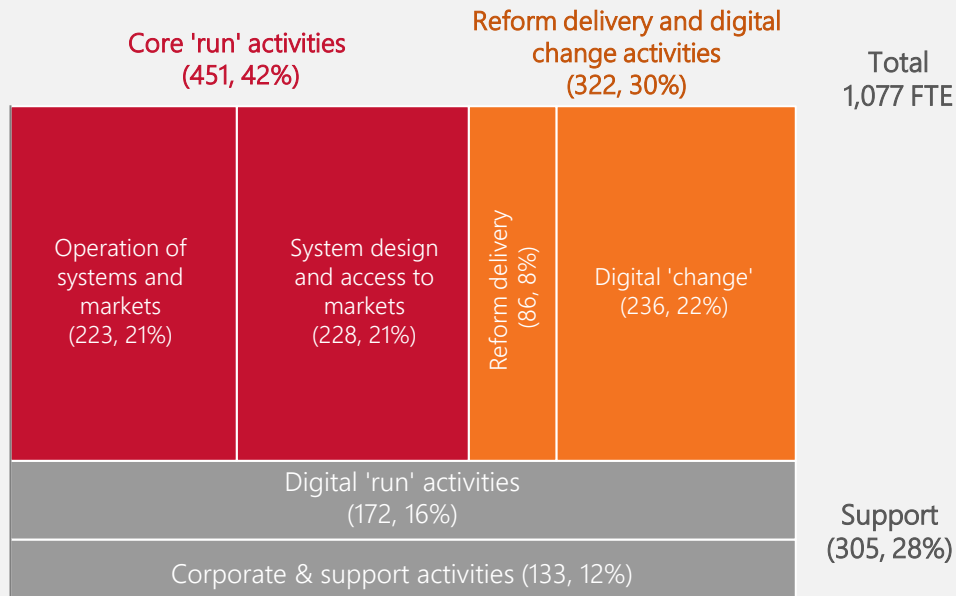


Core/support activities represent 2/3 of effort, 1/2 of cost

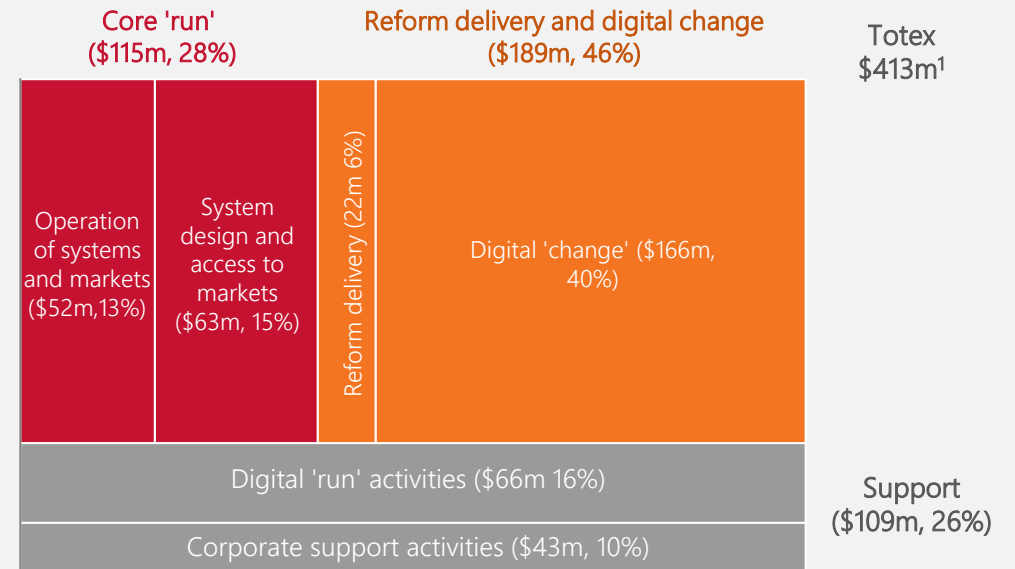
Core and support activities required to run AEMO represent two-thirds of effort...

...and half of totex spend, with bulk of non-labour and project spend directed to 'change'

Effort view (FTE)

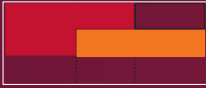


Cost view (\$m)



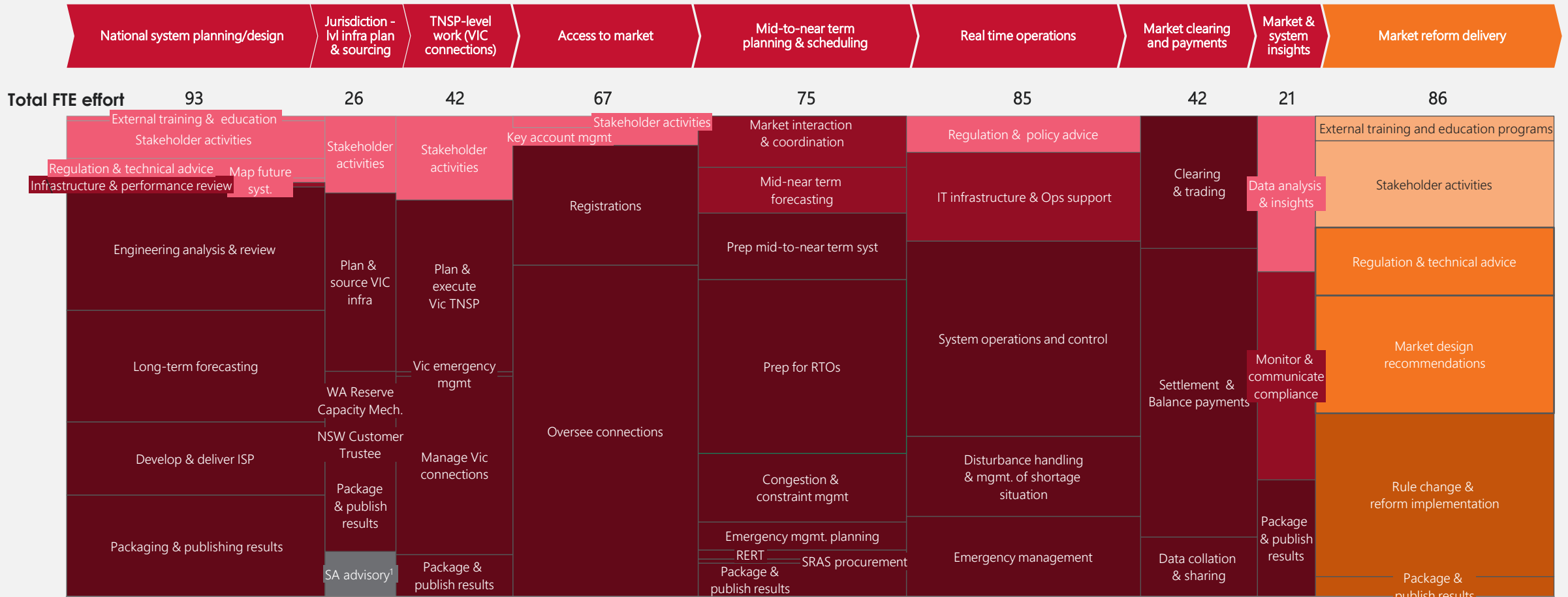
1. Totex includes labour opex (\$163m), non-labour opex excl. depreciation (\$72m), non-IT labour capex (\$16m), IT labour capex (\$32m) and non-labour capex (~\$130m)
Source: AEMO FY21 Actuals; AEMO Activity Based Understanding Survey 9 Aug 2021, N = 66; AEMO Employee data 24 June 2021; Team analysis

Majority of core activity traceable to mandate



Core 'run' activities 451 FTE²

Change 86 FTE²



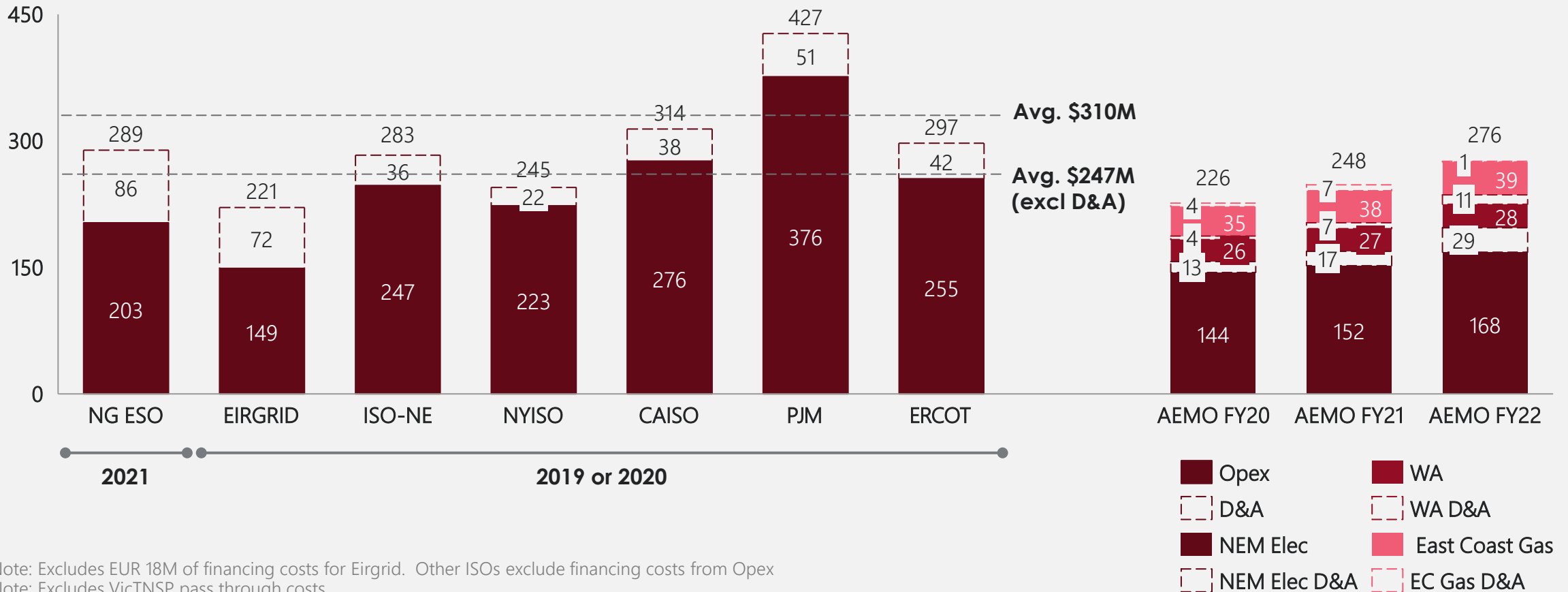
■ Mandated activity (national or jurisdictional)² 82% of core 'run' FTE effort
■ Enablement activity 8% of core 'run' FTE effort
■ Enhancement activity 10% of core 'run' FTE effort
■ 41% of change FTE effort
■ 39% of change FTE effort
■ 20% of change FTE effort

1. SA Advisory work is contracted, cost-recovered ~2.4 FTE (0.5% of core 'run' effort). 2. Overtime not included.
 2. Mandatory obligations are prescribed by different mechanisms, depending on national or jurisdictional requirements / projects
 Source: AEMO Activity Based Understanding Survey 9 Aug 2021, N = 66; AEMO Employee data 24 June 2021; AEMO website; AEMO services catalogue; Team analysis

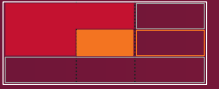


AEMO total operating expenses at low end of peer-range







AUD \$M p.a.



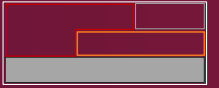
Note: Excludes EUR 18M of financing costs for Eirgrid. Other ISOs exclude financing costs from Opex
 Note: Excludes VicTNSP pass through costs
 FX rates applied are 1 USD = 1.45 AUD, 1 GBP = 1.83 AUD, 1 EUR = 1.6 AUD
 Source: Annual reports, AEMO Analysis, Team analysis



AEMO core operating expenses are on par with other ISOs

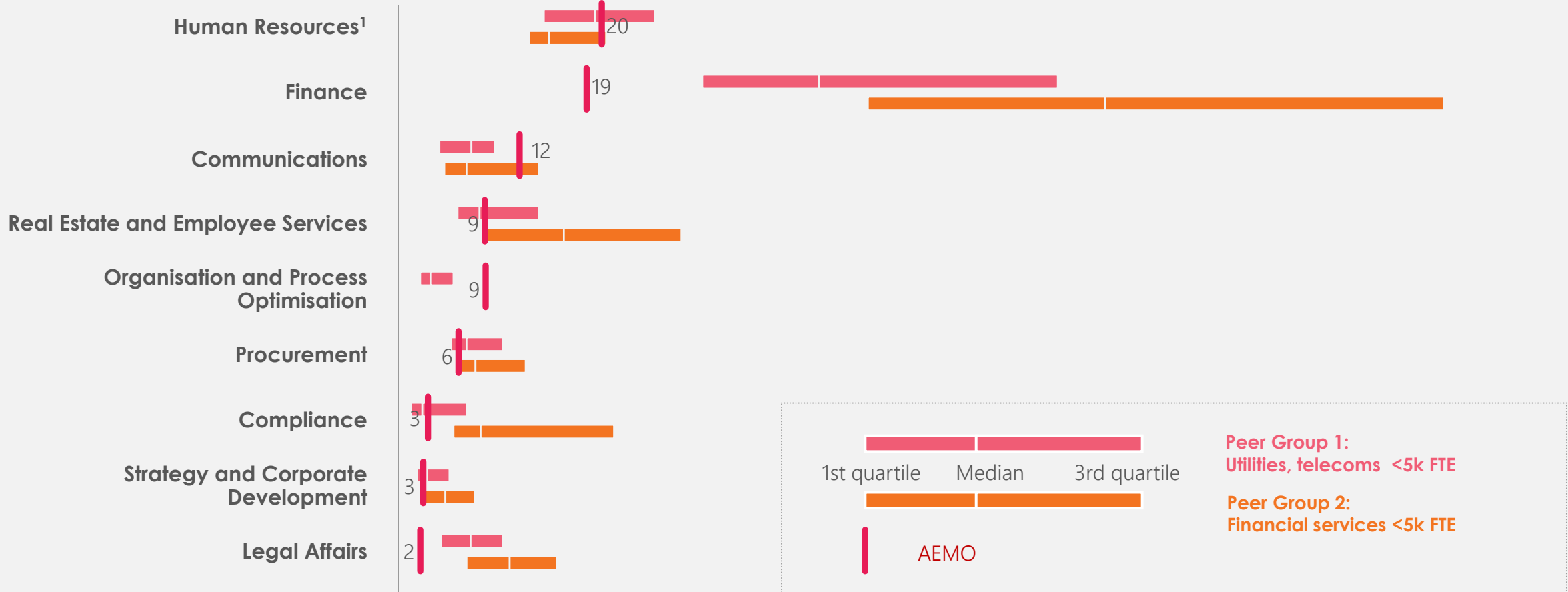
A\$m	National sys. planning/design	Jurisdiction-lvl infra. planning & sourcing	Access to market	Mid-to-near term plan. & scheduling	Real time operations	Market clearing and payments	Market and system insights	Market reform delivery	Core direct Opex	Admin & General Expenses (incl. digital) ²	Key market/ operator statistics
 (FY21) ¹	26%		17%	28%		29%			\$115 ¹ m	\$109m	Annual consumption (TWh): ~200 Population served (m): ~25 Network size (km): ~48k
 (FY21-22 plan)	15%		8%	40%		n/a	3%	34%	\$151m	N/A	Annual consumption (TWh): ~325 Population served (m): ~65 Network size (km): ~9k
 (FY20)	20%		n/a	34%		46%			\$103m	\$141m	Annual consumption (TWh): ~120 Population served (m): ~15 Network size (km): ~14k
 (FY20)	7%		n/a	31%		62%			\$87m	\$103m	Annual consumption (TWh): ~160 Population served (m): ~20 Network size (km): ~18k
 (FY20)	15%		n/a	39%		46%			\$126m	\$149m	Annual consumption (TWh): ~240 Population served (m): ~40 Network size (km): ~40k
 (FY20)	17%			46%		37%			\$101m	\$236m	Annual consumption (TWh): ~800 Population served (m): ~65 Network size (km): ~130k

1. ABU estimated core activity costs for all markets, though excludes TNSP-level work (\$12M) and gas (\$10m). 2. Excludes regulatory commission expenses
 Note: Not all costs in Annual Report are included in FERC submission; Applies exchange rates of 1 USD = 1.45 AUD and 1 GBP = 1.83 AUD;
 Source: ABU analysis; FY21 Financials; National Grid ESO Business Plan (RIIO-2); FERC Form No. 1 Submissions (2020) of US ISOs; Team analysis



Support function costs at low end of benchmark range

AEMO versus benchmark (FTE per 1,000 FTE), effort across the organisation



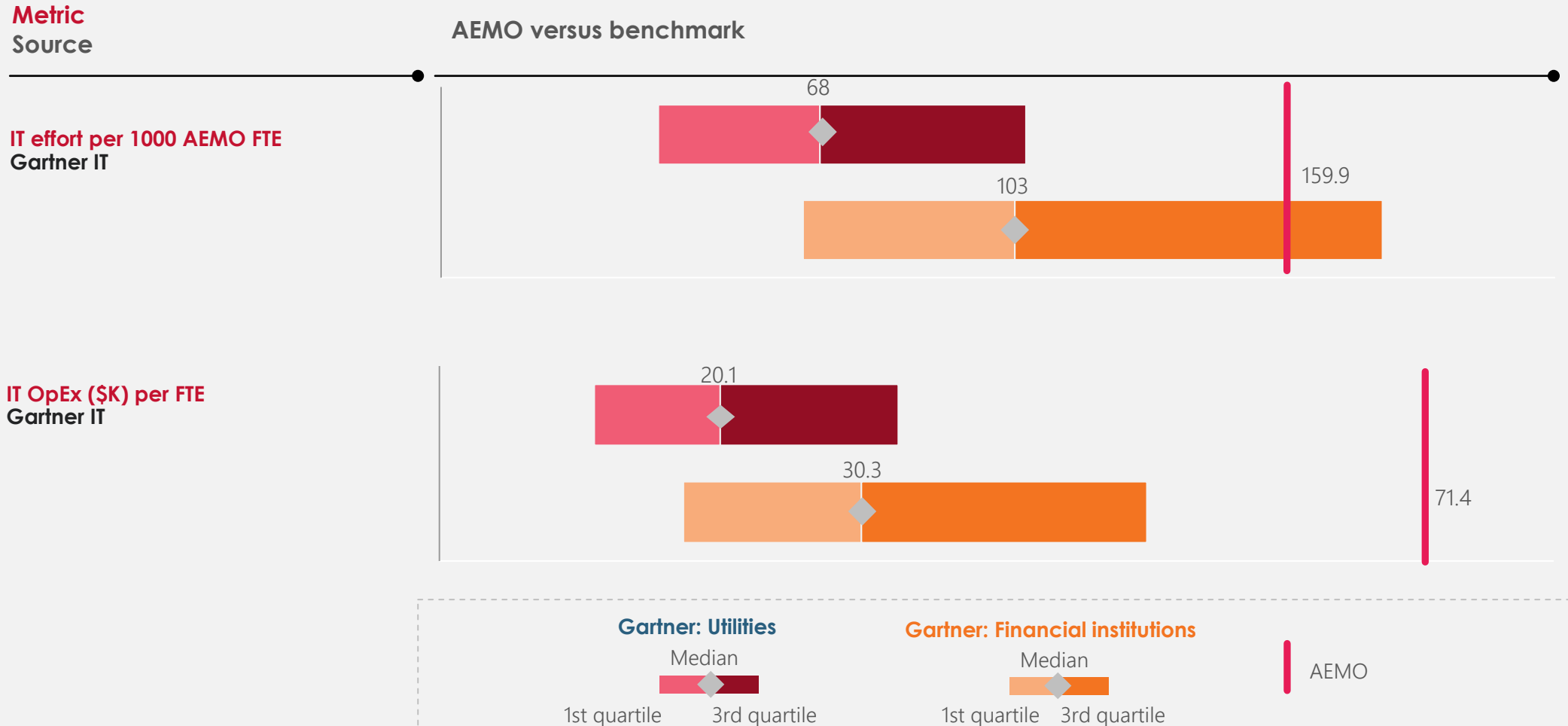
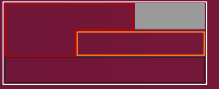
Note: ABO survey allocates FTEs across activities, not functions, consequently counting effort across the entire organisation. Benchmarks include full effort across org, typically includes contractors. OEP FTEs are included in the Organisation and Process Optimisation activity.

1. Not included 1.3 FTE effort on payroll from Finance team or 5.3 FTE effort on L&D from core functions teams

Source: AEMO Activity Based Understanding Survey 9 Aug 2021, N = 66. AEMO Employee data 24 June 2021; Excellence in Support Function Database

Digital 'run-the-business' costs higher than benchmarks

Substantial Legacy Tech Debt



Only "run" IT FTE considered for benchmark comparison 2. Spend benchmarks adjusted to remove capex, FX rate: AUD 1.45 to USD 1.00
Source: ABU activity survey, FY21 Financials; Benchmarks: Excellence in Support Function Database), Gartner IT Key Metrics 2021

Core recommendations

- 1 Re-align operating model for greater clarity and accountability
- 2 Transform the way AEMO governs, funds, and executes reform delivery
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