Fact and Confidentiality check response template - Report

Date: 22-Apr-26
Report name: TBH, The Hypothetical ELNO - Draft Report

Use this table to capture factual corrections in the report, and to justify claims of confidentiality . NOTE - CLAIM FOR CONFIDENTIALITY HAS BEEN ADDED VIA NEW SHEET: "CONFIDENTIALITY FEEDBACK"

Section	Sub-section	Page/Ref	Current text/figure	Issue/comment (including reasons for confidentiality claims)	Suggested change
Executive summary		2	At 100% market share, the report estimates that a hypothetical ELNO delivering core features would incur initial capital expenditure of between $42.1m and $64.0m to design and build the platform. In addition, ongoing capital expenditure is estimated at between $3.8m and $5.9m per annum, reflecting continued investment required to maintain and enhance the platform over time. Operating expenditure, excluding ongoing interoperability costs, is estimated at between $78.4m and $83.6m per annum to operate and maintain the platform over the period from financial year 2025–2026.	As evidenced by the other issues/comments provided in this document, PEXA asserts that a hypothetical ELNO delivering core features could not be built or run at the estimated costs provided. Aside form the errors in formulas and assumptions (such as superannuation %), as TBH have defined the hypothetical ELNO as being regulatory compliant, but concurrently appear to believe the juristictional expansion and document coverage are discretionary instead of regulatory obligations and that 100% market share is achieveable without ongoing investment into juristictional expansion and document coverage, this has led PEXA to believe the cost estimates are materially inaccurate. Key issues with the estimates appear to be: - Lack of understanding of the MOR requirements, which appear to be seen as not required for core features - Lack of understanding of the requirements to achieve 100% market share, that this would naturally result in being national critical infastructure, compliance to the SOCI Act and the build and ongoing costs for 100% document and 100% jurstrictional coverage - Lack of understanding of other regulatory requirements that govern ELNO operations, including that ELNOs must also comply with Conditions of Approval and Operating Agreements with individual land registry operators	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
Executive summary		1	"The development of a Hypothetical ELNO, based on modern software engineering practices, scalable architecture, and efficient operating design, and the associated benchmark cost profile; "	The report relies on unsubstantiated assertions that "modern software engineering practices" will enable cost reductions that are not supported by any real world experience building an ELNO. Whilst the proposed architecture is directionally appropriate it assumes a level of simplification that does not fully reflect the operational realities of a nationally significant, critical, regulated platform. As a result, the model significantly understates the cost, effort, and risk associated with implementation, integration, and ongoing operation. This is evidenced by the fact that PEXA engaged Thoughtworks a global leader in engineering best practices to help build its UK eConveyancing platform ($295Mill spend to date) and has spent $300+ in Australia to date on a platform that is at 90%+ document penetration. Other evidence points that show this statement as being inaccurate include Lextech independently assessing the cost to build an ELNO from scratch using the latest engineering standards at $200 million and Sympli has built what is claimed to be a modern platform and has invested $168+mill (FY25) with limited document coverage.	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
Executive sumr	Executive summary	3	All text following "Key Findings" (p.2) ending in "efficient service deliver" (p.3)	The Key Findings in the Report are the combined result of incorrect information, inaccurate assumptions untethered from justification or benchmarks, and a model that fundamentally misunderstands the nature of an ELNO's operating and regulatory environment. They therefore should not be relied upon or published. The only elements that could described as accurate are so generalised and high level that they are simply motherhood statements that could apply to any industry or company - and even these are not linked to evidence in the report, but are presented as self-evident. As discussed throughout this document, the parameters and assumptions used in the Hypothetical ELNO model are significantly lower than those that would be required to meet TBH's definition of "an operator that delivers all required functionality in accordance with the MORs and relevant legislative obligations, operates a secure, reliable, and scalable platform, adopts modern, maintainable, and cost-effective system architecture, and maintains appropriate service quality and risk controls at an efficient cost."	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
	2 2.1	11	ELNOs operate within a legislative framework governing electronic conveyancing across Australian jurisdictions, supported by national coordination through the Australian Registrars' National Electronic Conveyancing Council (ARNECC). This framework establishes the legal validity of electronic lodgment and financial settlement, enabling digital transactions to replace traditional paper-based conveyancing processes.	This is not quite right. In addition to the MORs, ELNOs must also comply with Conditions of Approval and Operating Agreements with the individual land registry operators. This is the minimum regulatory framework applicable to the operation of the ELN. In NSW the Conditions of Approval are published, and include additional operational requirements such as customer service levels (prescribing call waiting times that drive resourcing for customer support operations). They also prescribe testing and change management protocol. It is not reasonable to say that minimum requirements are captured under the MOR where compliance with those requirements is supplemented by more prescriptive obligations across the different jurisdictional Approval Conditions/Operating Agreements. Imminent changes are expected in Queensland where Approval Conditions will include higher system performance thresholds than otherwise prescribed in the MOR.	Amend to reflect structure of the eConveyancing regulatory framework
	2 2.2	11	"While the MORs establish a minimum baseline of capability, control, and service standards, they do not prescribe the ways in which the ELNOs implement these requirements. This allows for variation in system design, architecture, and operating models, while maintaining consistency in functional outcomes and regulatory compliance."	While the MORs don't prescribe the ways in which the ELNO designs its system architecture, they do prescribe several minimum system requirements at section 10. Within those requirements are references to the Data Standards (NECDS), Registrar Business Rules, Services to enable assessment of integrity and various other requirements. The MOR also contains drivers for continuous improvement which must be complied with. At sections 22 and 23, in respect of amendments or additional Operating Requirements, there is an expectation in the MOR Guidance Notes that "...compliance with your obligation to ensure that your ELN is soundly designed and provisioned, including being reliable, scalable and flexible, will enable your compliance with this requirement (refer Section 10.1)."	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
	2 2.2	11	All of section 2.2 Model Operating Requirements	The regulatory requirements in section 2.2 seems to indicate that the MOR sets the "minimum baseline of capability, control and service standards". As outlined below, there doesn't seem to be an understanding of what the minimum baseline is, including: It must be a national platform - We must digitise any registry instrument or document capable of being digitised MOR 5.2 - We must encourage widespread industry use MOR5.1 - We must have a SOC2 controls review and by default we must meet the standards within SOC2 MOR 7.12.1(e)(iii) - The system must be available 99.8% of the time MOR Schedule 2 MOR states 5.3 (d) an ELNO must obtain, maintain and comply with all necessary licences and regulatory approvals required by any appropriate authority to provide and operate the ELNO System. Further there appears to be no understanding of PEXA's what 'all necessary licences and regulatory approvals' are, including: - Legal obligation to comply with the Security of Critical Infrastructure Act 2018 (SOCI Act) - Legal obligation to comply with operating agreements with individual state and territory Land Registries - Legal obligations to comply with operating agreements with individual state and territory state revenue office - Legal obligations to comply with the Reserve Bank of Australia operating agreement - Legal obligations to comply with the Victorian Unclaimed Money Act 2008. - APRA requirements under CPS230 as a material service provider, who provides a critical operation to Australia's banking institutions - Legal obligations from ASIC agreed when ASIC gave PEXA an exemption from being required to hold an Australian Financial Services Licence. ELNOs will also have Participation agreements with each of the FI which specify how we engage with them. These PAs are a mixture of bespoke (for large FIs) and standardised for smaller ones. The participation agreements specify: •Regulatory requirements •Security •Availability •How PEXA must interact with the FI •Reporting requirements – these are often bespoke given the nature of individual PAs All of these obligations have cost implications which appears to have been ignored in the report.	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
	3 3.1	12	For the purposes of this review, a Hypothetical ELNO is defined as an operator that delivers all required functionality in accordance with the MORs and relevant legislative obligations, operates a secure, reliable, and scalable platform, adopts modern, maintainable, and cost-effective system architecture, and maintains appropriate service quality and risk controls at an efficient cost.	The definition in itself is not incorrect. The error is that through the rest of the document its clear that there isn't a sufficient understanding of the MOR's or relevant legislative requirements, and an insufficient understanding of the security and control environment required for National Critical Infrastructure under the SOCI Act. For example when explaining why PEXA may have a higher cost base than calculated by TBH, its suggested that PEXA's "large organisation structure...may also indicate ongoing investment activity, jurisdictional expansion and document coverage, rather than a steady state operating model." Indeed our operating model does reflect ongoing investment activity, jurisdictional expansion and document coverage, as they are a direct requirement of the MOR's 5.2. Further inconsistencies between this definition and the assumptions used when calculating the costs of a Hypothetical ELNO include: - the required functionality in accordance with the MOR (as outlined in our response to Section 2.2.; appendix) - delivery to all relevant legislative obligations (as outline in our response to 2.2) - a secure, reliable platform (as described in 8.5) - appropriate service quality (as described in our response to section 5.5; 3.2) - definitions of functions required by the MOR as non-core (see Appendix comments) In addition the definition ignores MOR 5.1, that an ELNO must encourage widespread industry use. To deliver on this obligation PEXA must focus on customer satisfaction, needs and requirements and continue to innovate for our customers. There is a distinct lack of appreciation of this requirement across the methodology and report. PEXA has delivered very high levels of customer satisfaction based on a detailed understanding of customer needs and requirements. Independent research shared with IPART/TBH clearly shows customers prioritise service quality, reliability and resilience over price.	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
	4 3.2	12	"....a Hypothetical ELNO is defined as an operator that delivers all required functionality in accordance with the MORs and relevant legislative obligations....."	The Report and Model almost entirely omit the cost and strategic importance of customer needs, evolving expectations, and ongoing relationship management in its customer service requirement assumptions. In a network-driven market, these functions are not discretionary, they are fundamental to sustaining scale. The assumption that an ELNO can achieve and maintain material market share without sustained investment in these areas is not supported by observed market behaviour, as seen in PEXA's initial launch and the current experience of PEXA UK. If customers were treated as the hypothetical ELNO's model suggests, any ELNO would quickly shed customers reducing its network effects and therefore lose efficiencies. The hypothetical ELNO therefore reflects a theoretical tool, rather than a commercially viable, regulatorily compliant, customer-facing digital platform, and therefore produces a fundamentally flawed benchmark for 'efficient' cost.	Explicitly acknowledge that the narrow definition of a efficient ELNO will deteriorate the customer features and customer experience due to network effects which will lead to increased costs.

3	3.3	13	A hypothetical ELNO characterised by streamlined workflows, modular API-driven architecture, and an optimised cost profile.	Section 3.3 describes a hypothetical ELNO characterised by streamlined workflows, modular API-driven architecture, and an optimised cost profile. While TBH states this model has been informed by software engineering best practices and assessment of cost drivers, it does not reflect a fundamental constraint that shapes every aspect of how an ELNO is designed, built, and operated: the regulatory and risk control obligations that are not discretionary and cannot be engineered away through system design choices. An ELNO does not have the freedom to optimise purely for cost efficiency. The system architecture, operational model, and control environment of a compliant ELNO are materially constrained by obligations that TBH's hypothetical design does not acknowledge or account for. Under the Security of Critical Infrastructure Act, an ELNO operating at the transaction volumes assumed in this model would be required to maintain a Critical Infrastructure Risk Management Program, meet mandatory cyber incident notification timeframes, and implement security controls commensurate with its designation. These obligations are not design choices — they are statutory requirements that directly constrain architecture, staffing, tooling, and operational processes. Under the Material Operational Requirements, an ELNO must maintain defined standards across system availability, security, identity and access management, audit and logging, subscriber certification, and ongoing compliance reporting. Each of these requirements imposes specific design and operational costs that a genuinely compliant hypothetical ELNO cannot avoid through workflow standardisation or modular architecture. As a material service provider to APRA-regulated financial institutions, an ELNO must also satisfy the third-party risk management obligations of its subscribers under APRA Prudential Standards CPS 234 and CPS 230. These obligations require demonstrable and auditable security controls, defined recovery time and recovery point objectives, and ongoing participation in bank-driven assurance processes. These are not optional service enhancements — they are conditions of operating as a trusted platform for regulated entities processing property settlements. The hypothetical ELNO described in section 3.3 does not reflect these constraints. A system architecture that is genuinely streamlined and optimised without accounting for these obligations is not a model of efficient delivery. It is a model of non-compliant delivery. TBH's benchmark should be revised to reflect the full risk and control framework obligations that constrain the design and operation of a compliant ELNO, and the cost implications of those obligations should be carried through the build and run cost assumptions in the model.	Section 3.3 should be revised to acknowledge that the design and operating model of a hypothetical ELNO is materially constrained by statutory and regulatory obligations that cannot be optimised away through system design choices. The description of the hypothetical ELNO should reflect the risk and control framework requirements imposed by the Security of Critical Infrastructure Act, the Material Operational Requirements, and the third-party assurance obligations flowing from APRA Prudential Standards CPS 234 and CPS 230. The cost implications of these obligations should be reflected in the build and run cost assumptions throughout the report.
3	3.3	13	"assessment of cost drivers and system design choices. This ensures that the benchmark reflects a realistic and achievable model of efficient delivery."	This is inaccurate. As is set out throughout this table, the “cost driver assumptions” that have informed the Hypothetical ELNO are in many cases inaccurate, and lack any supporting evidence. Similarly, the “system design choice” described are not grounded in an accurate understanding of an ELNO’s regulatory or operating environment. For example, the support framework within the Hypothetical ELNO could not be compliant with regulatory requirements set out in the NSW Operating Agreement. Similarly, the Hypothetically ELNO’s lack of a risk management framework and skeletal system security staff and resourcing would not possibly be able to adhere to APRA’s CPS230 requires (necessary for any service provider to the banks at scale), or the requirements of the Security of National Infrastructure Act (which applies to PEXA and would have to similarly apply to a Hypothetical ELNO with 100%, or even 80% market share). The Hypothetical ELNO is neither an “realistic” nor “achievable” benchmark model of efficient delivery. Rather, it reflects a non-compliant model that fails to meet fundamental regulatory requirements. Additional examples of inaccuracies are reflected throughout this table.	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
4	4.2	15	The current ELNO environment comprises two operating platforms, PEXA and Sympli, both of which perform the core market function of facilitating electronic conveyancing transactions, including lodgment and financial settlement, within a regulated, multi-party ecosystem.	The description throughout the report and illustrated here through "PEXA and Sympli, both of which perform the core market function of facilitating electronic conveyancing transactions" suggests that PEXA and Sympli are equal ELNOs with similar functionality. However, there are significant service offering differences between the two ELNOs. Both Sympli's and PEXA's websites provide an overview of the document coverage offered by each ELNO which shows that Sympli is not active in ACT, Tasmania and Northern Territory; offers refi, caveat stand-alone discharge/mortgage in NSW, VIC, QLD, WA, SA and only offers Transfer capability in NSW and QLD. On a national basis, Sympli's document coverage is less than 50% of PEXA (based on FY25 document volumes). Another example of differences in technical and operational baseline between the ELNOs, which was highlighted repeatedly in the workshops, is the management of 'in flight' transactions when managing NECDS upgrades. The complexity is proportional to the volume of multi-party transactions where PEXA at any given time will have 100k+ and Sympli none/few given low multi-party transaction coverage. As such, the technical and operational baseline is NOT the same across ELNOs. PEXA experience significantly higher technical and operational complexity from managing substantial more documents across more jurisdictions. https://www.sympli.com.au/services/	The report should acknowledge the vastly different technical and operational baseline the ELNOs operate from and the implications this have for both build and run costs
				The statement that "PEXA and Sympli, both of which perform the core market function of facilitating electronic conveyancing transactions" also infers that the small number of common transaction types currently offerred by Sympli to limited juristictions is all thats required under the MOR, but per MOR under 5.2 an ELNO has a requirement to be a national platform and to enable the lodgment of 'any' document or instrument which are capable of lodgment in the jurisdiction.	
4	4.2	15	"Standard transaction types, such as refinance and transfer follow defined sequences with clearly allocated responsibilities across participants, including roles such as Incoming Mortgagee, Discharging Mortgagee, Vendor, and Purchaser. "	Transactions do not follow defined sequences. Real world customer utilisation shows that there are numerous alternate transaction flows as evidenced by the user journey map information provided to TBH.	Remove references to standard transaction flows and revise model estimates and key findings as a result.
4	4.2	15	"While variations may arise depending on transaction specifics and participant behaviour, the underlying process model is standardised and repeatable"	The theoretical standardisation of the underlying process is not pertinent for build costs. It is the requirements to support actual transaction specifics and participant behaviour that must be accounted for in the requirements that drive build costs. The report does not take this complexity into consideration in its requirements assessments making its build estimates redundant.	Remove section, revise model estimates to reflect actual ELNO requirements and revise key findings.
4	4.2	15	"This suggests that while complexity exists, it is not uniformly distributed across all types of transactions and may be managed differently through system design"	The complexity of the requirements that must be accommodated is a factor of the land registry document requirements, the regulatory requirements, the changes to the Data standards, the version of the data standards each Land Registry is using, the number of inflight transactions on different versions of the data standards and the needs of the system users. It is not possible to solve for these complex requirements by standardisation or system design. The report provides no evidence that this is achievable. All real world experience of building an ELNO demonstrates that this assertion holds no validity.	Remove section, revise model estimates to reflect actual ELNO requirements and revise key findings.
5	5.1	25	External Integrations - While each integration reflects the specific requirements of the relevant external party, common design patterns can be applied across interfaces. This creates opportunities to standardise integration approaches and improve efficiency in both development and ongoing operations.	There are more than 180 individual FIs that are connected to the Exchange, either directly or through existing arrangements, along with specific links to various government organisations such as the RBA, LR and SROs. These interfaces are individual given that there are only one in the country / state – they therefore are not suitable for standardised integration approaches.	Section should be revised to reflect that there are significant differences between each of the interfaces and links and whilst there are standardisations within the industry, there are significant components which are individual to each participant.
5	5.1	25	Data and reporting services - Such capabilities can typically be delivered using established, off-the-shelf technologies, enabling efficient implementation without the need for extensive bespoke development.	Most reporting underway are for specific ARNECC and FI requirements and therefore need to be bespoke to meet their requirements.	Section should be revised to reflect that reporting is bespoke for Regulatory purposes and participation agreement purposes and therefore are required to be in specific formats, and using specific data definitions and types.
5	5.3	30	A cost effective ELNO focused on core services would be expected to maintain security control proportionate to risk profile.	TBH assume that a mere 5 IT security personnel could run an ELNO with 100% market share. As the market leading ELNO with 90% market share and over $720 billion in settlements moving through the platform and National critical infrastructure, PEXA strongly disagrees with TBH's characterisation of what constitutes proportionate security controls for an ELNO. Proportionality must be assessed against the actual risk profile of the platform, not the scope of services it delivers. An ELNO processing over four million property settlement transactions and moving over $720 billion in funds per year, connecting directly to state land registries and the Reserve Bank of Australia, and serving tens of thousands of subscribers across APRA-regulated financial institutions carries an inherently high and fixed risk profile. That profile does not diminish with a narrower service scope. PEXA's publicly reported experience demonstrates the scale of this threat: in FY25, our security program defended against more than 6.5 million attempted intrusions with no compromise to platform integrity or availability, requiring an investment of more than $10 million per year in cybersecurity supported by a team of more than 20 security subject matter experts and 24×7 managed security services. A hypothetical ELNO with equivalent market share would face an equivalent threat environment and require equivalent controls. The security controls maintained by PEXA are not discretionary. Under the Material Operational Requirements, an ELNO must maintain defined standards across system availability, security, identity and access management, audit and logging, subscriber certification, and ongoing compliance reporting. As a material service provider to APRA-regulated financial institutions, an ELNO must also satisfy the third-party risk management obligations of its subscribers under APRA Prudential Standards CPS 234 and CPS 230, requiring demonstrable and auditable security controls, defined recovery time and recovery point objectives, and ongoing participation in bank-driven assurance processes. These are conditions of operating as a trusted platform for regulated entities processing property settlements, not optional enhancements that can be optimised away through streamlined system design. PEXA's security controls have also been subject to multiple independent external reviews annually as part of the Fit for Purpose process. At no point have those reviews concluded that PEXA's security posture is excessive or disproportionate. TBH's contrary conclusion is not supported by the evidence.	Section 5.3 should be revised to acknowledge that the design and operating model of a hypothetical ELNO is materially constrained by statutory and regulatory obligations that cannot be optimised away through system design choices. The description of the hypothetical ELNO should reflect the risk and control framework requirements imposed by the Security of Critical Infrastructure Act, the Material Operational Requirements, and the third-party assurance obligations flowing from APRA Prudential Standards CPS 234 and CPS 230. The cost implications of these obligations should be reflected in the build and run cost assumptions throughout the report.
5	5.3	30	PEXA has implemented Infrastructure as Code to provision and manage its cloud environments, indicating a mature engineering approach. The platform is designed to accommodate peak demand, with evidence suggesting that capacity may be conservatively provisioned to ensure reliability.	We are required by MOR and PA requirements to ensure that we estimate and be able to transact at peak volumes. The minimum requirement (and not the conservative requirement) therefore is to meet this expectation.	Remove the line: with evidence suggesting that capacity may be conservatively provisioned to ensure reliability.
5	5.3	30	Software-as-a-Service solutions to support platform functionality, including identity management, customer support, monitoring, analytics, and collaboration tools. While these represent standard technology choices individually, the overall number and diversity of SaaS providers may contribute to increased system complexity and operating cost when considered at a portfolio level.	The individual SAAS providers are directly aligned with MOR and / or other regulatory requirements (e.g. LR and PA Requirements). It is unclear which SAAS provider is considered to be superfluous to the overall service delivery of the exchange. If the SAAS providers were not in place, the expectation is that the development would be performed in house, further increasing overall costs and potentially complexity, which is another aspect that has been raised in the report elsewhere.	Remove: the overall number and diversity of SaaS providers may contribute to increased system complexity and operating cost when considered at a portfolio level.
5	5.3	30	A Hypothetical cost-effective ELNO focused on core services would be expected to maintain security controls proportionate to its risk profile and system footprint.	However the key driver of security costs and decisions are not driven by core services. They are driven by: •Current threat landscapes •MOR and regulatory requirements •Critical Infrastructure requirements •Adequate protection of data that is being held within the Exchange PEXA applies risk assessment methodology (using the above as the foundational standards) to determine the proportionate level of cybersecurity activity based on the above factors. It is not driven by the types of core / non-core services being applied.	Remove: security controls proportionate to its risk profile and system footprint
5	5.4	30	Reported metrics include a user base of approximately 30,000, around 6,000 workspaces accessed daily, peak volumes of approximately 5,000-page loads per minute, and up to 215,000 notifications per day.	PEXA's userbase is ~60,000 users active over the past 90 days, with approximately 15,000 users per working day accessing approximately 28,000 workspaces accessed daily with on average 6,000 workspaces settling each working day.	Revise the paragraph with accurate figures. Update models to reflect correct volumes and infrastructure cost impacts.
5	5.5	31	"Approximately four squads, or around 40 FTEs, are allocated to land registry integration. While this level of resourcing may be justified during initial development, ongoing requirements would typically be expected to reduce once interfaces are stable."	The teams working with the 8 land registries to extend documents coverage and maintain NECDS compliance is 4 squads and ~ 37 FTEs allocated to ensure delivery of MOR requirements 5.2 and 10.3. It is incorrect to suggest that resourcing would be expected to reduce once interfaces are “stable”. This assumption reflects a traditional one-off integration model, which does not apply in this context. The scope of work is not finite, but is continuously driven by Land Registries and ARNECC through the ARWG governance framework to deliver MOR 5.2 and MOR 10.3. This includes ongoing expansion of document coverage, jurisdiction-specific rule changes, and continuous NECDS compliance uplift. As a result: •The volume and sequencing of work is externally determined, not controlled by the ELNO •The work program is continuous rather than stabilising, with new requirements introduced each year •Delivery of this work is a regulatory obligation under MOR 5.2.1 (c,d) and MOR 10.3 and is required to maintain ELNO licence Accordingly, resourcing levels are not indicative of inefficiency, but reflect the structural, ongoing nature of regulatory and registry-driven change required to operate a national ELNO platform.	Correct the FTE numbers. Update wording to reflect mandatory nature of ARWG roadmap. Update estimates for efficient ELNO that are associated with this observation

5	5.5		31	"This suggests a service model that prioritises responsiveness and support, potentially exceeding what is required for efficient operation in a stable, standardised environment."	This statement reflects an incomplete understanding of both the operating environment and the role customer operations plays in delivering MOR and other legal obligations on ELNO's. In New South Wales, ELNOs are subject to the Registrar General's Conditions of Approval, which impose explicit requirements relating to service levels, see below. In addition there is an overarching obligation under MOR section 8 that requires the ELNO to maintain a standard that does not diminish confidence in the titles register, which by extension includes ELNO functions prior to lodgement and registration of title and there is a MOR obligation 5.1 to encourage widespread industry use, which couldn't be done with low levels of customer service. NSW Specific requirements can be found in the link below and can be summarised as: **Customer Surveys (Clause 5.2)** - Annual survey of customers covering quality of ELN services, ease of use, and availability/reliability - Must also assess effectiveness of customer support and issue resolution - Survey results report (including proposed actions) due to the Registrar within 40 Business Days of submissions closing **Enquiry Response Times (Schedule 3)** - Phone calls answered within 1 minute — 75% of the time - Abandoned calls kept below 5% - Escalated calls kept below 35% - Emails answered within 3 Business Days (100%) - Complex/escalated emails answered within 5 Business Days (100%) - In-person average wait time under 15 minutes **Continuous Improvement (Clause 6.1)** - Must continuously improve services for subscribers and the wider conveyancing industry **Incident Notification** - Must notify subscribers of any system suspension or outage and its impact on transactions - Major incidents reported to Registrar within 24 hours **Quarterly Reporting** - Must include updates on customer experience initiatives (e.g. dedicated NSW helpline) in quarterly reports to the Registrar https://www.registrargeneral.nsw.gov.au/__data/assets/pdf_file/0003/1394193/PEXA-Renewal-of-Approval-with-conditions_2025.pdf PEXA's service model is structured to deliver on these requirements. Additionally the TBH report seems to assume a simple support model, but due to the complexity required to deliver on MOR obligations, the key functions of PEXA's Customer Operations team as broader and include: - Onboarding & adoption — actively drive customer onboarding and adoption of complex digital workflows across a diverse customer base - Systemic issue identification — identify and feed back systemic product, process and ecosystem defects to enable fixes at the source - Continuous improvement — enable continuous improvement and automation opportunities to be realised across the platform - Exception & incident handling — manage complex exception cases and incidents, including where digital flows break down in real time - Fraud remediation — handle fraudulent payment remediation to protect customers and the integrity of transactions - Change management & training — support change management, training and broader enablement across a significantly diverse customer base	The report must clearly reference and appropriately consider critical commercial and service delivery functions and factors including: - the central role of customer service in transaction execution - the ongoing need for account and relationship management - the significant cost and complexity of customer acquisition and retention in a network market - the practical necessity of broader service scope beyond narrow "core" functions
5	5.5		30	"This reflects a large organisational structure relative to the functional scope of ELNO services and may also indicate ongoing investment activity, including jurisdictional expansion and document coverage, rather than a steady-state operating model."	It is incorrect to state that an ELNO, including an incumbent, should be in a "stead-state operating model." This fails to understand and account for the regulatory requirements within the MORs (5.2 and 10.3) and sub-MORs instruments (such as state- and territory-based operating agreements) that require constant investment in new documents. This reflects a fundamental misunderstanding of the actual scope of ELNO services in the document's assumptions. The MORs require that ELNOs enables the Lodgment of any electronic Registry Instruments and other electronic Documents not listed in Operating Requirement 5.2.1(b), which are capable of Lodgment in the Jurisdiction (MOR 5.2.1). This is currently over 800 document types – many of which are uncommercial to develop but nevertheless must be developed in compliance with the MORs. In addition, there are bi-annual updates to the NECDS data standards that require updates to documents already available in each of the eight jurisdictions. Note that each document update impacted by NECDS changes must remain compatible for transactions that are already underway, i.e. backwards compatibility need to be catered for inflight transactions already in present on the platform. For reference, in the past 2 calendar years (2024-2025) each of our quarterly deployments included new or updated documents supporting the ARWG roadmap. Similarly, as is the case with many digital platform and service providers, customer expectations are continually increasing, as are the myriad of threats from increasingly sophisticated cyber criminals and scammers. Continuous investment beyond "stead state" is therefore required to meet regulatory obligations, customer expectation and security requirements. ARNECC is considering instituting minimum investment requirements based on a percentage of revenue (10% has been proposed, so approximately $30 million for PEXA), in recognition of the need to meeting ongoing investment requirements. As such, it is incorrect to suggest a Hypothetical ELNO could operate with simply a "steady-state" approach to investment as the Model suggests and still be compliant with regulatory requirements and meet customer expectations	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
6	6.1		33	Cost inputs are based on the defined Hypothetical ELNO architecture and operating model, observed industry practices and engineering benchmarks	Both the report and the supporting exe file lacks transparency on the "observed industry practices and engineering benchmarks'. It seems reasonable for the report to clearly outline what these industry practices and benchmarks are given the assertions the report makes on PEXA's efficiency level. It is difficult to help correct what has driven errors and wrong assumptions when there is no transparency on these. As there is not a broad ELNO industry, in Australia or globally, one should use cross-industry benchmarks carefully. What is obvious is that for the few areas where there are other independent expert estimates, the report significantly and consistently under-estimates cost, (and documented in other areas of PEXA's submission, for example 1) the overall build costs estimate is ~20% of actual build costs (PEXA Australia, PEXA UK, Sympli) and well as Lextech's estimate for an ELNO; and 2) the IoP costs which ARNECC's independent experts estimated to be 6 times bigger than the report's estimate; and 3) the FI integration which in the report is estimate to be ~1 sprint (2 weeks) for a bank integration when Sympli and PEXA UK examples suggest ~12 months. The cost modelling is not credible as there is no evidence or methodology provided to support the underlying assumptions and the key results have not been triangulated or assessed against other datapoints when available.	Update underlying modelling assumptions to reflect 'hypothetical efficient ELNO' description; provide overview of what industry practices and benchmarks that have been leveraged; and cross-check and triangulate findings with other third-party data points and estimates where they exists (and leverage this across other areas where external reference points are not available)
6	6.2	34-36		"The following figures are key excerpts from the model that provide a consolidated view of the costing estimates within this section and Section 7 and have informed the findings in this report."	PEXA's position is that the figures provided are based on fundamentally flawed assumptions and reflect a misunderstanding of the regulatory and operating environment of an ELNO.	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions are clearly explained and justified.
6	6.4		37	"Variable costs scale with transaction volumes, including certain transaction-based third party charges."	This comment does not reconcile with the scenarios modelled in the workbook. Staffing costs in scenario 4 (in which Hypothetical ELNO has 10% market share) are estimated at $9.1m whereas in the 50% market share scenario, staffing costs have only increased to $10.9m ($1.8m for 40% market share gain). For the 100% scenario, staff costs are estimated at $12.3m (only $3.2m increase from the 10% scenario despite a 90% uplift in transaction volumes).	Update FTE requirements to reflect impact of scaling of volumes.
6	6.8		38	The model explicitly distinguishes between costs associated with core ELNO services and those associated with non-core or ancillary functionality, as defined in the Appendix. Core costs relate to the delivery of lodgment and financial settlement services, consistent with regulatory requirements. Non-core costs relate to additional functionality that is not required for core service delivery.	There appears to be contradictions around the treatment of financial settlement services which are referred to at 6.8 as core costs consistent with regulatory requirements but described throughout the Appendix as non-core. There is a risk that this binary view of core vs non core is conflated with essential vs non-essential when the MOR does not provide the comprehensive catalogue of system and, more importantly, operational obligations. Change Management Frameworks (MOR 13.1), Release Management (MOR 13.4), National system and electronic registry instrument capability (5.2) are a few examples of regulatory obligations that drive constant discovery, planning, building and testing of system releases and functionality. This is reinforced through the Implementation Plan (13.3) and Business Plan (referred to at MOR 5.1 and 5.2) which drive continuous improvement of service and functionality. We refer TBH to the MOR Guidance Notes for MOR 5.2 in particular as it outlines the ongoing nature of ELN system development. The core and non-core framework does not fully account for the interdependencies within a complex digital platform like an ELNO, or the range of factors relevant to its operation. Consideration of technical regulatory requirements alone does not encompass the broader governance and operational structures that support effective functioning. The list does not provide a complete view of ELNO requirements and time constraints to respond prevent PEXA from undertaking a detailed review of all core and non-core elements, and those omitted. Consequently, the analysis of core and non-core elements is insufficient to establish an 'efficient' ELNO, insofar as the efficient ELNO must be commercially viable which requires trust and confidence in the operational strength of the ELNO.	Revise and revalidate the underlying assumptions and/or requirements with ELNOs particularly re-examining the core v non-core framework, which failures to accurately reflect an ELNO's operating requirements. Update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
6	6.9		38	"This framework is implemented within the Hypothetical ELNO Cost Model, including and supporting calculation logic. It enables explicit treatment of scale effects, comparison of cost efficiency across different levels of market participation, and alignment of Hypothetical ELNO costs with the observed scale of incumbent operators."	The modelling assumes the hypothetical ELNO will have support for all transactions. Variable costs are linearly attributed to transaction costs, which for many costs isn't realistic. Examples: - Supporting 800+ documents and integrations with externals, require ongoing updates, irrespective of volume of transactions. - Subscribers and their users that are registered on the platform, will need to be maintained (manage compliance obligations, dormant user processes, maintaining customer details)	Revise and revalidate the underlying assumptions regarding ELNO requirements. Update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.
6	6.10		39	Quality assurance and validation controls were applied throughout the development of the Hypothetical ELNO Cost Model to ensure accuracy and consistency. .... The Hypothetical ELNO is designed and costed in accordance with industry best practice software engineering principles,	Similar to our response to section 6.1, PEXA notes there are no evidence of the supposed 'quality assurance' or 'industry best practise' in the report or in the model. High level assumptions are provided with no reference to underlying logic or estimation approach. PEXA believes that if the report had contained sufficient quality assurance abd reasonable best practise, it would have avoided the large discrepancies highlighted in our response to section 6.1. for example 1) the overall build costs estimate is ~20% of actual build costs (PEXA Australia, PEXA UK, Sympli) and well as Lextech's estimate for an ELNO; and 2) the IoP costs which ARNECC's independent experts estimated to be multiple times bigger than the report's estimate.	The report should qualify what quality assurance and best practise has been leveraged and how this has impacted the assumptions and estimates. Without this link it is hard to understand/challenge rationale for estimates.
7	7.1		40	"The model has been developed using a structured, bottom-up approach that reflects the resources required to design, build, and operate a Hypothetical ELNO that is cost-efficient."	From the information provided in the report, there seems to be an insufficient understanding of requirements to support modelling the cost of a Hypothetical ELNO that is compliant with regulatory and other applicable requirements. Furthermore the model shows significant underestimating of effort required. See as example Workbook feedback Cost Inputs Malc Row 44 & Cost Inputs Malc Row 21-23	Revise and revalidate the underlying assumptions and/or requirements with ELNOs, update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.

8	8.2		43	While some level of complexity is inherent in interfacing with external systems, the level of ongoing effort required appears elevated relative to expectations for a mature and standardised environment.	This conclusion is based on an assumption that an ELNO can operate on a "set-and-forget" basis, with effort reducing over time in a mature, standardised environment. This does not reflect how the ELNO ecosystem operates. As outlined in workshops, the data standards (NECDS) governing interactions between PEXA and Land Registries are continuously evolving, driven by ARNECC and jurisdictional requirements. PEXA must maintain alignment with these standards (MOR 10,3), making this work ongoing and regulatory in nature. In addition, Land Registries continue to introduce changes to document types, business rules and digitisation initiatives MOR 5.2). This creates a continuous pipeline of externally driven change, rather than a stable steady state in which effort materially reduces. Sustained resourcing is therefore required not only to implement these changes, but also to manage their impact on a large volume of in-flight transactions.	Adjust 'set and forget' assumption and update requirements on back of actual expectations and obligations
8	8.2		43	In particular, the scale of resourcing dedicated to certain core functions suggests that costs may not be scaling proportionately with transaction volumes.	It is likely that the comment of 'lack of scaling' is driven by a lack of appreciation of ELNO obligations but it is hard to be certain given it is unclear what the referenced 'core functions' are. Without specifics it appears to be a statement without merit.	Revisit assumption with a better understanding of REG obligations. Be more specific in assertions.
8	8.2		43	"PEXA's platform reflects elements of legacy architecture and historical design decisions. Aspects of the platform appear highly integrated and complex, with ongoing effort required to maintain and modernise core components…." "Overall, the findings suggest that structural factors play a significant role in driving cost differences between ELNOs, and that scale alone does not explain observed cost variations."	Complexity is not driven by transaction volumes, but rather by maintaining 800+ documents types across multiple versions of the data standards, with bi-annual changes to the data standards consistent with our MOR obligations 5.2 and 10.3. While the patterns have stabilised there are ongoing change requests (updates to the NECDS + jurisdictional variations) that have to be catered for by PEXA. Managing those changes across 8 different jurisdictions, coordinating and testing these changes, supporting in-flight long-running transactions is where the complexity surfaces. Attributing this to 'legacy design decisions, accumulated system complexity, or suboptimal architectural approaches' is unsubstantiated. Note that Sympli supports a small subset of the overall capabilities (supported documents and instruments) of the PEXA platform, therefore cost difference analysis should take in considerations the increased cost of managing the extended capabilities that PEXA needs to maintain.	Acknowledge in the report that complexity is not solely scaling with transaction volumes, but is heavily impacted by the breadth of transactions covered by an ELNO - and account for this in the Model.
8	8.2		43	Aspects such as land registry integration and transaction orchestration have been identified as complex and resource intensive. While some level of complexity is inherent in interfacing with external systems, the level of ongoing effort required appears elevated relative to expectations for a mature and standardised environment.	This fundamentally misunderstand and misrepresents the nature and level of complexity for a platform service to connect with multiple systems, a significant number which are legacy applications and do not have the same modern technology and architecture as specified by the report. Further, the differences within the architecture places extra requirements from a resiliency perspective, which is fundamental to MOR obligations. These two alone mean that these must be considered as part of core costs.	Revise the wording to acknowledge: 1) there is significant effort required to maintain and upgrade due to the complexity of the ecosystems. 2) Resiliency processes need to accommodate the significant differences and complexity in relation to the ecosystem.
8	8.3		44	The platform appears supported by dedicated engineering teams focused on quality, resilience, and stability. While these capabilities are expected, the scale of resources allocated to operational support appears high relative to a platform designed for automated, self-managing operation.	The fact that the platform is designed for automated self-managing operation does not mean that there are no human interactions and involvement required to ensure that autoscaling is occurring appropriately. The overall systems landscape is complex, and the autoscaling element considers one aspect of the overall environment. The resiliency team is focused not only on the ELNO autoscaling component but on ensuring other interfaces are working appropriately. These interfaces do not lend themselves to be autoscaled given their legacy architecture.	Remove references to say that the operational support appears high relative to platform designed for automated self-managing operation.
8	8.3		44	Excessively conservative control environments may contribute to elevated costs without proportionate benefits.	PEXA is required to ensure that we abide by MOR, Participation Agreements and SOCI obligations. The level of resilience and control required to meet these obligations, be coupled with overarching threat environment requires continuous monitoring and layered approach to ensure that these minimum requirements are met. Our minimum service requirements by ARNECC and the various LRs specify that we are required to meet customer call centre service levels which must therefore require a minimum number of experienced operators. Our SOC2 reports are audited on an annual basis and identify the core key controls to meet ARNECC and FI expectations. The current reports do not identify any areas which are excessively controlled within the PEXA environment. These SOC2 reports are standardised across the technology and service industry and the reports demonstrate that we are meeting the minimum requirements. It is agreed that there should be appropriate balance between resilience and cost efficiency, whilst still maintaining and demonstrating regulatory obligations – PEXA has achieved the balance between all three, as evidenced by the SOC2 and Fit for Purpose reports, which are independently reviewed.	Remove: Excessively conservative control environments may contribute to elevated costs without proportionate benefits.
8	8.5	45-46		"PEXA's emphasis on high availability, extensive support structures, the layered control environment suggests a conservative approach to risk management. While reliability is critical…an appropriate balance must be maintained between resilliance and cost efficiency."	PEXA disagrees with TBH's characterisation that its security controls may exceed what is required for efficient service delivery, and rejects the suggestion that its approach to risk management is excessively conservative. PEXA believes our security environment is designed to meet its MOR obligations, with specifice reference to SOC2, MOR 7.3.2. TBH conclusions are unsupported by evidence and are inconsistent with both the regulatory obligations that govern ELNO operations (MOR 7.3) and published Australian benchmarks for organisations of comparable regulatory profile. Proportionality must be assessed against the actual risk profile of the platform, not an abstract standard of cost efficiency. An ELNO processing over four million property settlement transactions per year, connecting directly to state land registries and the Reserve Bank of Australia, and serving tens of thousands of subscribers across APRA-regulated financial institutions carries an inherently high and fixed risk profile. That profile does not diminish with a narrower service scope, and it cannot be managed through a conservative approach that happens to cost less. PEXA's publicly reported experience demonstrates the scale of this threat: in FY25, our security program defended against more than 6.5 million attempted intrusions with no compromise to platform integrity or availability, requiring an investment of more than $10 million per year in cybersecurity supported by a team of more than 20 security subject matter experts and 24x7 managed security services. TBH's report does not engage with this evidence. The assertion that PEXA's controls may be excessive is made without reference to the threat environment those controls are designed to address. Published Australian benchmarks further contradict TBH's characterisation. The CISO Lens Benchmark 2024, drawing on data from 96 organisations across Australia and New Zealand and endorsed by the Australian Cyber Security Centre, reports a median security budget of $12 million and an average of $28 million across all respondents in FY24. The report further identifies 9 percent of ICT budget as an "absolute floor" for appropriate security investment. Against this benchmark, the Model implies a security spend ratio of approximately 4 percent, less than half the published floor, applied to one of only two licensed ELNOs in Australia operating under SOCI, ARNECC, and APRA CPS 234 obligations simultaneously. If PEXA's controls are excessive, they are excessive relative to a benchmark floor that independent Australian data says has not yet been reached. On headcount, the same benchmark found the median security team size across all respondents was 30 FTE, with an average of 68 FTE. For Large Financial organisations, defined as ASX-listed entities with market capitalisation above $10 billion and the closest available comparator by regulatory profile, the average security team represented 1.20 percent of total organisational headcount. However, the report explicitly identifies heavily regulated industries as warranting a higher baseline, stating: "Of course, heavily regulated industries are a notable exception." This is confirmed by the benchmark's top 10 respondents by security-to-headcount ratio, who averaged 2.69 percent, and of whom nine had fewer than 5,000 staff. The report is unambiguous: it is regulatory obligation, not organisational scale, that drives security team sizing at the upper end of the benchmark range. Applied to PEXA's workforce, the top 10 average of 2.69 percent produces an indicative figure of approximately 13 FTE. TBH's assumption of 5 FTE sits below the Large Financial benchmark average and well below the figure indicated for a heavily regulated organisation of PEXA's profile, which operates concurrently under SOCI, ARNECC, and APRA CPS 234 obligations, placing it squarely within the heavily regulated exception the report identifies. The security controls maintained by PEXA are not discretionary enhancements applied conservatively. Under the Material Operational Requirements, an ELNO must maintain defined standards across system availability, security, identity and access management, audit and logging, subscriber certification, and ongoing compliance reporting. As a material service provider to APRA-regulated financial institutions, an ELNO must also satisfy the third-party risk management obligations of its subscribers under APRA Prudential Standards CPS 234 and CPS 230, requiring demonstrable and auditable security controls, defined recovery time and recovery point objectives, and ongoing participation in bank-driven assurance processes. These are conditions of market participation, not a conservative philosophy that can be recalibrated in the interest of cost efficiency. PEXA's security controls have been subject to multiple independent external reviews annually as part of the Fit for Purpose process. At no point have those reviews concluded that PEXA's security posture is excessive or disproportionate. TBH's contrary conclusion is not supported by the evidence and should not form the basis for benchmark cost assumptions.	Should be revised to reflect that the controls and resilience measures maintained by PEXA are not discretionary. They are driven by statutory obligations under the Security of Critical Infrastructure Act, APRA Prudential Standards CPS 234 and CPS 230, and the operational requirements of a platform processing continuous high-value property settlements at national scale. The characterisation of PEXA's control environment as potentially exceeding efficient service delivery should be removed. The section should instead acknowledge that the cost of maintaining a compliant, secure, and continuously available ELNO is inseparable from the regulatory and threat environment in which it operates, and that any benchmark which does not account for these obligations does not represent the cost of an efficient ELNO. It represents the cost of a non-compliant one. The impact of these obligations should be reflected in the scope, build, and run cost assumptions throughout the report and in its key findings.
8	8.6		45	The analytical framework distinguishes between costs required to enable interoperability capability and those arising from implementation choices	"The IoP costs estimates are illustrative of the overall issues with the cost estimate methodology and results. The written report estimates IoP costs between $2.1-3.3mill based on estimate of 120 people months although it is unclear how the 120 is estimated. In comparison, independent experts, NOUS, appointed by ARNECC released a report in Dec 2025 that explored cost and benefits of various IoP solutions. As can be seen from the report, the estimated costs to an ELNO is ~$6.5mill While the IoP costs have been removed due to recent regulatory updates, the inaccuracy vs independent experts with some subject matter knowledge Is a good illustration of how wrong the majority of the assumptions are. The NOUS estimate is 100+% higher than the report estimate.	It is insufficient to remove reference to IoP costs. This is an example of how the report has been rushed and not based on solid assumptions. The significant difference between the report and ARNECC's independent experts should cause a rethink of approach and methodology
9	Draft Findings and I		46	Comment on whole section	Implementation choices are often arisen through a number of different factors, which have not been appropriately considered in this document. For example: •Limited by APIs with integrated partners such as FI, RBA where they are not on modern architecture, so the existing environment needs to cater for this •Implementation choices were made using modern systems at the time of implementation. The broader technology environments have moved and PEXA is balancing the following: -Ensuring that PEXAs primary focus is to ensure transactions are completed on time and are non-repudiated, giving confidence to the Australian public -Uplifting existing infrastructure in a considered way to ensure that upgrade risks are managed appropriately, whilst still continuing to embed current technology practices •It is unclear how TBH is defining platform complexity and how this complexity: -Somehow significantly impacts the overall cost -Reduction in this complexity will reduce the overall cost, and does not take into consideration the overall costs / efforts required to reduce the complexity.	Further articulation on the queries in the issue / comment
9	9.1		46	"The software landscape should be rationalised to reduce duplication, integration overhead, and unnecessary complexity. A more streamlined set of third-party solutions would support improved cost efficiency and reduce operational burden."	There is no evidentiary basis for this statement. Neither the Report nor model set out why the suite of software products utilized by PEXA (or other ELNO providers) exceeds what would be required by a Hypothetical ELNO that fulfils its functions and regulatory requirements. Rather, the model simply lists software platforms without justification on which services could be streamlined and how their function could be done without or managed in a different way. The statement is a motherhood platitude that, while accurate, does not provide any evidence for including or removing particular software products or functions. It does not provide the critical and required linkage between the software suite used by PEXA, and any evidence of inefficiency, be it "duplication, integration overhead, [or] unnecessary complexity."	Remove the section and revise assumptions around require software platforms, or provide a detailed rationale for the inclusion or exclusion of products from the list deemed "efficient."
10	10.4		48	Where required, reasonable assumptions have been applied and have been clearly identified	It is not appropriate to note that: - 'reasonable assumptions have been applied' - as noted in the workbook feedback there are multiple examples of how the assumptions are mis-aligned to other reference points (for example, overall build costs, IoP costs, build month estimates, incorrect superannuation rates) - " [assumptions] have been clearly identified" - the report outlines overall cost estimates but very little detail on the actual cost drivers and the key approach/methodology for determining the estimates/assumptions.	Revise and revalidate the underlying assumptions and/or requirements with ELNOs particularly re-examining the core v non-core framework, which failures to accurately reflect an ELNO's operating requirements. Update the model accordingly, and then revise and redraft the Report based on the updated model, ensuring all assumptions changes are clearly explained and justified.

11	11.1	49	The consultation process included three workshops with each ELNO. The first workshop focused on establishing the current state, technical architecture, and operating constraints. The second workshop focused on targeted technical questions and clarification of specific data points and cost drivers. A third workshop was conducted with each ELNO to validate the core and non-core features within the ELNO platform, that informed the consolidated recommended features and functions set out in the Appendix	The third workshop with PEXA was cancelled. There was a 1h meeting with a small group of SMEs (presumably now considered workshop 3) on feature list where PEXA commented on a draft list of core vs. non-core features. PEXA requested to see the revised list from the discussion but it was not shared. It would be incorrect to suggest that PEXA validated the core vs non-core feature list as the broader feedback clearly outlines a range of concerns.	Update to accurately reflect the nature of TBH's engagement with PEXA, including appropriate articulation of engagement limitations.
Appendix	Appendix	50	The following table sets out the overarching features identified through the material provided by IPART and further refined through stakeholder workshops with PEXA and Sympli. It reflects TBH's view of the features and functions that are considered core, and non-core (ancillary) to ELNO service delivery based on the MORs. In addition to the MORs, core features and functions also include operational enablers that are required to facilitate electronic lodgment and settlement. Non-core features are those that are not essential to the completion of the conveyancing process and represent additional, value-added, or commercially driven functionality.	The summary of core and non-core features and functions gives the impression of a comprehensive coverage of the features and functions, and therefore costs required to build and operate a compliant ELNO. However, the table captures only the capital expenditure associated with the initial build of each feature. It does not reflect the ongoing operational expenditure required to run, maintain, and continuously improve those features once built. This is a structural omission that understates the true cost of operating a compliant ELNO across several material dimensions. The most significant gap is the absence of any opex equivalent to the build cost table. For every feature classified as Core, there is a corresponding ongoing operational cost that is not captured in this table and is not transparently mapped to the run cost assumptions elsewhere in the model. The build cost of a feature is a one-time investment. The operational cost of running, supporting, maintaining, and continuously improving that feature is a recurring annual obligation that in many cases exceeds the original build cost over any reasonable operating horizon. This gap is most clearly illustrated by FID05, Training and accreditation modules, which TBH has costed as a build item of $428k to $655k. The ongoing operational requirement to deliver, maintain, and continuously update training and accreditation for 60,000 plus subscribers across financial institutions, conveyancers, and legal practitioners is not a build activity. It requires dedicated operational capability to develop and maintain training content, manage accreditation workflows, support subscribers through onboarding and re-accreditation, and respond to regulatory changes that require training updates. This represents an ongoing annual cost that is seemingly absent from the model. The build cost of the training platform does not substitute for the operational cost of running a national subscriber accreditation program. This pattern repeats across the feature table. Features are costed to build but not to operate, staff, or continuously improve in response to regulatory change, subscriber growth, or evolving threat and compliance obligations. The appendix should be revised to include an opex dimension for each feature, reflecting the ongoing personnel, tooling, and operational costs required to sustain each capability at the standard required of a compliant national ELNO.	The appendix feature table should be expanded to include an ongoing operational expenditure dimension alongside the current build cost entries. For each Core feature, the table should reflect the annual cost of operating, maintaining, and continuously improving that feature, including the subject matter expertise required to support it. FID05 in particular should be revised to reflect the full ongoing cost of delivering and maintaining a national subscriber training and accreditation program, including dedicated SME resourcing across identity, digital, observability, and security disciplines. The build cost of a feature and the operational cost of running it are distinct and both material to an accurate benchmark.
		50	FID01 - ELNO verifies practitioner eligibility (legal entity, ABN, etc.) to access the ELN in accordance with Participation Rules.	This obligation includes activities such as support and administration for onboarding workflows, legal agreement execution and validation, manual intervention for exception scenarios and regulatory audit requirements - all associated costs should be considered core	The appendix feature table should be expanded to include an ongoing operational expenditure dimension alongside the current build cost entries. For each Core feature, the table should reflect the annual cost of operating, maintaining, and continuously improving that feature, including the subject matter expertise required to support it.
Appendix	Appendix	51	FID04B -Integration capability connecting the ELN to third-party electronic identity verification services to streamline VOI processes. This can be performed manually. Non-core	Manual VOI checks to satisfy the ELNO's MOR obligations (schedule 7) is most efficiently performed via an Identity Agent (which is permitted under the VOI Standard in the MOR). Manual verification requires face-to-face interviews only (physical, in-person). It would be inefficient to have PEXA outposts in every capital city, or require Subscribers to visit Victoria and develop a reception/booking function. There is only one Identity Agent in Australia capable of meeting the ARNECC requirement, being AusPost. For an ELNO of any scale, it is most efficient to utilise AusPost to undertake VOI of Subscribers. All associated costs with this integration should be included in the cost of any hypothetical cost efficiet ELNO, unless the significant costs of manual identification are included in the costing.	Reclassify as Core, or correct Core cost assumptions
Appendix	Appendix	51	FID10B -Enhanced reporting tools providing firm-level performance and productivity insights beyond transaction execution requirements. This would benefit the ELNOs by optimising their operations. Non-core	TBH state "The development of a Hypothetical ELNO, based on modern software engineering practices, scalable architecture, and efficient operating design, and the associated benchmark cost profile; " An efficient operating design should not be assumed, if the costs to create the efficiencies are not included.	Reclassify as Core, or correct Core cost assumptions
Appendix	Appendix	56	FID18 Digital workflow functionality enabling collection and management of Client Authorisation documents from clients through electronic channels beyond minimum certification requirements, This could be done manually. Non-core	This digital workflow has been digitised to create efficiencies. All associated costs with this should be included in the cost of any hypothetical cost efficiet ELNO, unless the significant costs of manual identification are included in the costing.	Reclassify as Core, or correct Core cost assumptions
Appendix	Appendix	56	FID44 Automated calculation and adjustment of source funding line items within the Financial Settlement Schedule to resolve settlement shortfalls without manual reconciliation. Whilst it is not core, it is recommended as it will minimise manual checks that may be needed. Non-core	This Automated calculation and adjustment of source funding line has been automated to create efficiencies and to improve on day settlement, linked to MOR 5.2, encourage widespread industry use. All associated costs with this should be included in the cost of any hypothetical cost efficiet ELNO, unless the significant costs of manual reconciliation are included in the costing.	Reclassify as Core, or correct Core cost assumptions
Appendix	Appendix	57	FID23 Mechanism confirming the validity and ownership of nominated source accounts used in settlement. Non-core	While there is no direct MOR requirement, with $750 billion flowing through the exchange annually and the MOR obligations 5.1 to encourage widespread industry use, confirming the validity and ownership of nominated source accounts used in settlement would to most end consumers be a core function.	Reclassify as core
Appendix	Appendix	57	FID50 Mechanism ensuring a Subscriber is authorised to debit funds from a nominated source account on behalf of the account holder prior to settlement execution. Non-core	While PEXA was given an exemption from ASIC and is not required to hold an Australia Financial Services Licence, with $750 billion flowing through the exchange annually and the MOR obligations 5.1 to encourage widespread industry use, confirming the Subscriber is authorised to debit funds from a nominated source account on behalf of the account holder prior to settlement execution should be a core function.	Reclassify as core
Appendix	Appendix	57	FID47 Capability to link multiple workspaces so their financial settlements occur simultaneously, ensuring interdependent transactions either all settle together, or none proceed. Non-core	While there is no direct MOR requirement, to deliver on the MOR obligations 5.1 to encourage widespread industry use, and to achieve any significant market penetration percentage the capability to link multiple workspaces so their financial settlements occur simultaneously is required.	Reclassify as Core, or confirm the number of simultaneous settlements and deduct this from the market assumptions.
Appendix	Appendix	58	FID24 - Core multilateral settlement execution infrastructure enabling simultaneous funds movement between participating financial institutions - Non-core	Financial Settlement is outside of the Regulatory scope of ARNECC but is a critical component of the operation of an ELNO. As a system that has been designated as Critical National Infrastructure PEXA has a regulatory requirement to operate its settlement platform to support the national economy. Further, MOR 10.8 requires "The ELNO must not present for Lodgment any electronic Registry Instrument or other electronic Document forming part of a Settlement Transaction unless the financial settlement is irrevocable." PEXA's Delivery versus payment financial settlement model achieves this - it is unclear how an efficient ELNO would satisfy this regulatory obligation by other means (and what might that cost to meet ARNECC's minimum requirements)?	Reclassify as core
Appendix	Appendix	58	FID25 Automated confirmation and reconciliation of settlement outcomes ensuring transactional finality and integrity, Non-core	While PEXA was given an exemption from ASIC and is not required to hold an Australia Financial Services Licence, with $750 billion flowing through the exchange annually, automated reconciliations of settlements funds are a operating function for a ELNO.	Reclassify as core
Appendix	Appendix	59	FID34B Integration capability connecting the ELN to financial institutions to enable funding, settlement processing and movement of funds as part of the financial settlement process - Falls outside the spectrum of regulated responsibilities; other market participants (e.g. banks) facilitate this, Non-core	A full service ELNO must build and operate Payment Integrations to multiple financial institutions to have the market coverage required to meet the MOR obligations. In the current Australian market this requires integration to 10 financial institutions each of which are distinct integrations. This is a requirement of the ELNO not the Financial Institutions.	Reclassify as core
Appendix	Appendix	61	FID38 Risk management framework, non-core	Risk management frameworks is required MOR 9.1. Classified the enterprise risk management framework as non-core while simultaneously stating in its own rationale that "a framework is necessary for ELNOs to meet operational standards." **This is a fundamental and self-contradictory error**. **A capability that TBH acknowledges is necessary for operational compliance cannot be excluded from a cost benchmark on the basis that it is non-core**. The consequence of this misclassification is most clearly illustrated by FID43, which TBH has classified as Core and covers SOC2 and penetration testing. A SOC2 audit cannot be scoped, executed, or passed without a formal risk management framework in place. SOC2 Trust Service Criteria explicitly require that an organisation has identified and assessed risks, implemented controls in response, and can demonstrate ongoing monitoring and remediation. TBH has costed the audit while excluding the framework that makes the audit possible. This demonstrates a fundamental misunderstanding of how risk governance and security assurance operate in practice, and calls into question the reliability of the broader cost model.	Reclassify as core
Appendix	Appendix	62	FID39 -Controlled change Framework. Structured governance framework ensuring system changes follow documented change management processes, including testing, approval and implementation controls. - Non-core	Under MOR 13.1 the ELNO must stablish, implement, use, monitor, review, maintain and keep current a documented, detailed and comprehensive Change Management Framework. The MOR Guidance Notes articulate the minimum requirements that would demonstrate compliance for the purpose of ongoing approval to operate the ELN.	Reclassify as core
Appendix	Appendix	63	FID42 - Comprehensive security governance framework ensuring protection of ELN systems and data in accordance with recognised information security standards. - Non-core	TBH has applied precisely the same self-contradictory rationale to FID42 as it has to FID38, acknowledging that "a framework is necessary for ELNOs to meet operational standards" while classifying it as non-core and excluding it from the benchmark entirely. **This is a fundamental error. An ISMS is not optional.** It is the foundational governance framework through which every security obligation an ELNO carries is managed, evidenced, and continuously improved. Excluding it from a cost benchmark while simultaneously acknowledging its necessity is internally inconsistent and demonstrates a fundamental misunderstanding of how information security governance operates in a regulated environment. The ISMS is not a standalone capability. It is the prerequisite for ISO 27001 certification, the governance structure within which SOC2 controls are defined and maintained, the framework through which SOCI Critical Infrastructure Risk Management Program obligations are discharged, and the evidence base against which APRA CPS 234 compliance is demonstrated. Every security feature TBH has classified as Core, including FID19 (audit trail), FID21 (fraud detection), and FID43 (SOC2 and penetration testing), depends on an ISMS to define its scope, manage its controls, and sustain its operation	Reclassify as Core
Appendix	Appendix	63	FID41 Exit & transition planning, Non-Core	Exit and transition planning, required MOR 21.1	Reclassify as core

Fact and Confidentiality check response template - Model

Date:
Workbook name: TBH, Draft cost model

Use this table to log factual corrections in the cost model.

Sheet	Cell/Range	Item	Issue/comment	Suggested change
5.1 Cost Inputs	H89	3.2	Formula only picks up roles from row 90-94 and excludes rows 95-97. As a result annual costs for Exec & Mgt is understated by $1.064m.	Cell H89 should be sum of cells (H90:H97).
5.1 Cost Inputs	H98	3.3	Formula only picks up roles from row 99-100 and excludes rows 101-107. As a result annual costs for Middle Mgmt is understated by $1.869m.	Cell H98 should be the sum of cells (H99:H107).
5.1 Cost Inputs	H109	3.4	Formula incorrectly adds CTC factor to annual salary instead of multiplying by it. As a result, cost of HR is understanded by $0.3m.	Cell H109 formula should be E109*F109*G109.
5.1 Cost Inputs	H110	3.4	Formula incorrectly adds CTC factor to annual salary instead of multiplying by it. As a result, cost of Finance is understanded by $0.479m.	Cell H110 formula should be E110*F110*G110.
5.1 Cost Inputs	H111	3.4	Formula incorrectly adds CTC factor to annual salary instead of multiplying by it. As a result, cost of Risk is understanded by $0.359m.	Cell H111 formula should be E111*F111*G111.
5.1 Cost Inputs	H113	3.5	Formula incorrectly adds CTC factor to annual salary instead of multiplying by it. As a result, cost of Customer Service is understanded by $0.768m.	Cell H113 formula should be E113*F113*G113.
5.1 Cost Inputs	H115	3.6	Formula incorrectly adds CTC factor to annual salary instead of multiplying by it. As a result, cost of Cyber is understanded by $0.359m.	Cell H115 formula should be E115*F115*G115.
5.1 Cost Inputs	F90, F91, F92, F93, F94, F95, F96	3.2	C-Suite benchmarking cited is insufficient for a hypothetical company classified as National critical Infrastructure, which processes over $750 billion in settlements annually, both in terms of base salary and the fact that TBH CTI factor excludes STI and LTI. Firstly, base salaries for CEO and CFO are understated for a company classified as National critical Infrastructure, which processes over $750 billion in settlements annually . Benchmarking from PWC or AON will support that. Secondly, companies of this size would incorporate short term and long-term incentive schemes for both the C-Suite and all remaining staff. Impact of no STI or LTI for a company with this revenue base needs to be reviewed.	Update salary benchmarking of C-Suite to reflect revenue of the hypothetical ELNO. Incorporate STI and LTI for all staff.
5.1 Cost Inputs	F174 & H174	9.3	Total employees estimated by TBH to run hypothetical Core ELNO set at a range of 95 (Low) to 111 (High). Platform Engineering - Build (Capex) 15 FTE (Low) to 23 FTE (High) Platform Engineering - Run (Opex): 15 FTE (Low) to 23 FTE (High) Executive and Management (Opex): 8 FTE Middle Management (Opex): 9 FTE HR (Opex): 5 FTE Finance and Payroll (Opex): 8 FTE Risk (Opex): 5 FTE Customer Service (Opex): 24 FTE Cybersecurity (Opex): 5 FTE	FTE's to operate the hypothetical ELNO are significantly understated and need to be updated to reflect: (1) Breadth of compliance requirements from the MOR and other regulation requirements (2) Account teams to support our customer base - both FI's and Practitioners (3) Workplace technology team to ensure the organisation runs smoothly and safely (4) Procurement team to ensure all services are secured at best possible terms and prices (5) Scaling of staff requirements for support functions as transaction volumes increase in the various scenarios modelled for 10% / 50% / 100% market share - current estimates are insufficient. (6) Appropriate sizing for the Call Centre team (7) Insufficient Cyber resourcing for a modern national critical infrastructure platform and compliance with the SOCI Act (8) Build effort has been substantially understated; as opex for Technology is based on a % of capex this needs to be addressed as run requirements are sufficiently understated (9) Marketing team to inform and educate customers and end-users regarding website, release information (10) Regulatory team is insufficient and needs to support 8 Land Registries (11) Pricing team to support changes for NECDS/SRO and the existing suite of products (12) Automated billing functionality
5.1 Cost Inputs	E109	3.4	Base estimate for HR function is untethered and not linked to any standard or baseline.	Update benchmarking - use APQC to reflect appropriate benchmarking for Support functions as % of revenue.
5.1 Cost Inputs	E110	3.4	Base estimate for Finance function is untethered and not linked in to any standard or baseline.	Update benchmarking - use APQC to reflect appropriate benchmarking for Support functions as % of revenue.
5.1 Cost Inputs	E111	3.4	Base estimate for Risk/Compliance function is untethered and not linked in to any standard or baseline.	Update benchmarking - use APQC to reflect appropriate benchmarking for Support functions as % of revenue.
Cost Inputs	H98	3.3 3.4 3.5	The model outlines a number of middle managers but none appears to have a team to help support them in their endeavours. This is also reflected in the wide range of roles and tasks that are required by an ELNO that is not accounted for in the model/assumptions. These include, but are not limited to, the following areas: - A Regulatory team supporting 8 Land Registries in day-to-day operations (responding to requests, incidents, planning of roadmaps, compliance management and reporting) - A team supporting large Financial Institutions and other integration partners (PMS, developers, Mortgage processing service providers) in the day-to-day operations (resolving issues; managing incidents; facilitating M&As; customer forums; translate industry needs into platform improvements, support settlement performance, and lead initiatives that drive efficiency, innovation, and platform resiliency) needed for MOR 5.1 encourage widespread industry use - A team supporting large lawyers and conveyancers (Practitioners) resolving issues; managing incidents; customer forums; translate industry needs into platform improvements, support settlement performance, and lead initiatives that drive efficiency, innovation, and platform resiliency) eeded for MOR 5.1 encourage widespread industry use - A marketing team that informs and educates both customers and end-users (web-site; release information; information campaigns (for example Scam Awareness); customer research) eeded for MOR 5.1 encourage widespread industry use - A team supporting workplace technology to ensure organisation runs smoothly and safely - A team supporting Procurement that ensures all services are secure at best possible terms and price - A legal team that oversees contract development; resolves legal issues; etc It would not be feasible to run an ELNO offering services in all jurisdictions and with 90%+ document coverage without all of these functions	Update model to include a team for workplace, tech, account teams, - only teams are support, and corp services
Cost Inputs	I84, I86	2.1 3.1	The model does not provide any capacity to enhance the feature set of an ELNO. The MORs require ELNOs to continue to expand services (MOR 5.2). The current ELNO environment is therefore not steady state. Proposed changes to the MOR require ELNOs to spend 10% of Revenues (not Build CAPEX) extending its services including extending to cover more documents in more jurisdictions. This requirement alone over three years would exceed to total cost the hypothetical model assumes a Steady State ELNO could be built for.	All estimates in model should be revised to reflect actual ELNO requirements.
Cost Inputs	I65-L65	1.1.9	There is an unsubstantiated estimate that IoP could be created in 120 people months which lead to a cost estimate of $2.1-3.3mill. There are no assumptions or rationale for the estimate which would have been helpful. Independent experts, NOUS, appointed by ARNECC released a report in Dec 2025 that explored cost and benefits of various IoP solutions. As can be seen from the report the estimated costs to per ELNO for IoP (Direct Connect) is ~$6.5mill per ELNO (Figure 1; Table 3) While the IoP costs have been removed due to recent regulatory updates, the inaccuracy vs independent experts with subject matter knowledge Is a good illustration of how wrong the majority of the assumptions are. The NOUS estimate is 100+% higher than the report estimate.	Leverage the insights form the IoP estimates to adjust the other unsubstantiated cost estimates (N4-N66) .
Cost Inputs	Row 69	1.2	PEXA provided updates to the active userbase and numbers of workspaces that are accessed on a daily basis (Section 5.4 in the report), which are significantly higher than currently documented in the report. It is likely that these changes impact the underlying assumptions made in Sheet 5.2 Infrastructure Costs.	Revise assumptions used in Sheet 5.2 Infrastructure Costs to ensure they reflect actual usage.
Cost Inputs	Row 75	1.3.1	See comments below on 31 & 33 on scope of tools & operations staffing gaps.	Build should reflect effort to deploy full scope of capabilities.
Assumptions and Instructions	Row 28	28C	Mandatory employer superannuation contribution (Australia-wide) is 12% and has been since 1 July 2025, not 11% as stated.	Correct to 12% rate.
Cost Inputs	I77-J80	1.4	There is no basis provided for the assumptions used to estimate Other Initial Build costs across Customer Service, Risk & Compliance, HR, Finance. All appears to assume 12 person months but unclear how that is determined. Build appears to ignore s/w costs during build phase as well as ongoing s/w costs for to support ongoing operations	Provide overview of reference/benchmark for original estimate and/or adjust in line with general industry benchmarks and ensure s/w costs are accounted for in ongoing OPEX

Cost Inputs	I113	3.5	Under the NSW Conditions of Approval to operate the ELN, ELNOs must meet prescribed customer service levels, including 75% of calls answered within 60 seconds and less than 5% call abandonment. These service levels are implemented nationally as ELNO operations are not distinguished by state. ARNECC is proposing to introduce these requirements in the MOR so that they apply nationally. These metrics do not account for fluctuations in call volume, either intra-day, day-to-day, or monthly variables in transaction volume. The metrics are based on performance over the month. They don't account for fluctuations due to incidents or new registry documents which drives call volume peaks. To be compliant, the ELNO must resource to meet these metrics each month. The TBH model materially underestimates required resourcing as it equates 'customer service' specifically with service provided only via 'call centre' staff. In this regard it incorrectly considers the call centre as a linear, fully-utilised processing function without sufficient regard for the random nature of call arrival, relevant staff shrinkage factors, regulatory and service level obligations, variable-demand factors, breadth of complexity, non-transactional workload etc. When the relevant factors are incorporated and modelled using commonly accepted workforce planning methodology, the resulting FTE requirement is significantly higher than the TBH estimate for 'Call Centre Staff. The TBH call centre staff modelling also overlooks the requirement to maintain appropriate team leader/team member ratios for sustainability as well as capacity buffers to account for attrition and mitigate relevant risks. In addition the modelling clearly ignores that overall operational support for customers extends outside the pure remit of call centre staff to include for example onboarding, maintenance and regulatory audit/compliance obligations, critical settlement-related support activities, customer and staff training requirements including knowledge management, creation and maintenance of training and help content, exception handling, incident management and communications,	
Cost Inputs	Row 114	3.6	Assumption of 5 FTE for cybersecurity operations vastly underestimates the resource requirements for securing a modern national critical infrastructure platform in compliance with the SOCI Act and SOC2 requirements (an MOR requirement). Each of the absent tooling categories outlined above has a direct resourcing implication that compounds this understatement: **Cloud Security Posture Management (CSPM)** tooling does not operate itself. It requires security engineers to triage posture findings, manage remediation workflows, and maintain configuration baselines across production, staging, and development environments. **Endpoint Detection and Response / Extended Detection and Response (EDR/XDR)** requires security operations personnel to monitor endpoint and cross-domain telemetry, investigate alerts, and manage response actions across the platform environment on a continuous basis. **Secure development tooling, including Static and Dynamic Application Security Testing (SAST/DAST)**, requires embedded security expertise within the engineering team to action findings, manage vulnerability backlogs, and enforce secure coding standards across the development lifecycle. **Information Security Management System (ISMS**) requires dedicated personnel to own the control framework, manage evidence collection, coordinate internal audits, and drive remediation. This is typically at minimum a full-time role in an organisation of PEXA's regulatory complexity. **Financial institution subscriber assurance obligations under APRA Prudential Standards** CPS 234 (Information Security) and CPS 230 (Operational Resilience) require personnel who can respond to bank-initiated security questionnaires, coordinate third-party assessments, and maintain the evidence and documentation that APRA-regulated institutions require. The tooling gaps and the staffing gaps are not independent errors. They reflect a single, fundamental mischaracterisation of what it actually costs to operate a compliant, resilient, and continuously monitored ELNO at national scale. Effective security for a platform of this nature also requires dedicated subject matter expertise across key security domains including identity and access management, network security, application security, and cloud security architecture. These are specialist disciplines that cannot be consolidated into a small generalist team, and their absence from TBH's resourcing model further demonstrates that the 5 FTE assumption bears no relationship to the real cost of securing a national infrastructure platform.	All estimates in model should be revised to reflect actual ELNO requirements.
Cost Inputs	F119	4.1	Assumption for Marketing spend is listed as: *"PEXA Revenue per transaction is calculated as $81.14/transaction based on their submission, while their corporate overheads were calculated as 0.5% of their revenue. The Hypothetical ELNO also uses the same ratio to calculate the Corporate overheads"* [presumably this was meant to say Marketing spend] There are no references to why this is an appropriate assumption nor any attempts to benchmark and reality check against other sources or digital platforms. Research suggests a typical marketing spend for SaaS platforms of 5-15% but that includes customer acquisition costs which would be less applicable for a 100% ELNO (albeit it would first have to attract the customer base which presumably should be reflected in build costs). Assuming the low end of the benchmark and accounting for little acquisition costs still suggest a spend of 1-2% of revenue rather than 0.5%.	Provide overview of reference/benchmark for original estimate and/or adjust in line with general industry benchmarks

Cost Inputs	Rows 121 to 157	5.1 5.2 5.3	**security tooling scope** appears to have been drawn from a basic cloud deployment reference rather than one designed to meet the requirements of a national critical infrastructure platform in compliance with the SOCI Act and SOC2 requirements which, based on the transaction volumes assumed in this model, would indeed be considered critical infrastructure. The model references only three AWS-native services — GuardDuty, Security Hub, and WAF — as its basis, with the supporting calculation note marked explicitly as "for information only, not used in the model." The following material tooling categories are absent from the model entirely: AWS-native infrastructure security services: **AWS Shield Advanced**, providing managed distributed denial-of-service (DDoS) protection for a platform processing continuous high-value settlement transactions where availability is a regulatory and commercial obligation. **AWS Firewall Manage**r, providing centralised firewall policy management, enforcement, and audit across accounts and environments in a multi-account AWS deployment. **AWS Transit Gateway firewall inspection**, providing controlled traffic flow inspection and policy enforcement across the network architecture. These are not optional enhancements. They are foundational infrastructure security controls for a multi-account, multi-environment AWS deployment, each carrying material and volume-sensitive cost. **Enterprise security tooling:** **Cloud Security Posture Management (CSPM)**, such as Palo Alto Prisma Cloud, providing continuous visibility into cloud infrastructure misconfigurations, compliance posture, and risk across multi-environment deployments. This capability cannot be substituted by AWS Security Hub alone. **Endpoint Detection and Response / Extended Detection and Response (EDR/XDR)**, such as Palo Alto Cortex XDR, providing behavioural threat detection, investigation, and response across endpoints and the broader platform environment. **Secure development tooling**, including **Static and Dynamic Application Security Testing (SAST/DAST)**, **Software Bill of Materials (SBOM)** capability, and **software supply chain security tooling** such as artefact repository scanning and container image verification. These capabilities provide automated security testing across the development lifecycle, continuous visibility into third-party and open-source components, and policy-enforced controls over software promoted through development, staging, and production environments. The threat in this space is growing rapidly, with supply chain attacks such as the Shai-Hulud npm ecosystem compromise demonstrating that open-source dependencies are an increasingly exploited vector against critical infrastructure. Their absence from the model is a material gap. **Threat intelligence services**, providing curated, operationally relevant intelligence on active threat actors, campaigns, and indicators of compromise targeting financial services and critical infrastructure. Commercially sourced threat intelligence feeds and associated integration costs are entirely absent from the model. **Vulnerability management tooling**, providing continuous scanning, prioritisation, and remediation tracking across the application and infrastructure estate. This is a distinct operational requirement from SIEM log monitoring and is not captured in TBH's Splunk or cloud tooling assumptions. **Secrets management and privileged access tooling**, required to manage credentials, API keys, and privileged access across a complex cloud-native environment. **Digital certificate management,** which TBH has explicitly costed at $0 (row 167), noting "customers get their own digital cert — no cost impact to ELNO operations." This assumption ignores the ELNO-side certificate infrastructure, lifecycle management, and integration to CAs to validate certificate validity capabilities required to operate a platform of this nature. Taken together, the security tooling provision in TBH's model reflects a narrow subset of entry-level AWS-native services that does not reflect the tooling investment required to secure, monitor, and maintain a national ELNO platform of this scale and regulatory significance.	All estimates in model should be revised to reflect actual ELNO requirements.
Cost Inputs	G163	7.1	Missed about $1mill in SRO costs The inclusion of NECDS costs should be extended to include SRO costs which are paid in VIC, WA and TAS per transaction (~$2.70 per dutiable document) Estimated volume per month in VIC, WA, TAS is ~28-30k	Include SRO in estimate
Assumptions and Instruc	Cells C13 to C20		Check transaction numbers / billing events	N/A - no material variances noted.
Cost Inputs	Row 44	FID34B	A full service ELNO must operate Payment Integrations to multiple financial institutions to have the market coverage required to meet the MOR obligations. In the current Australian market this requires integration to 10 financial institutions each of which are distinct integrations (typically consisting of multiple webservices with custom specifications and requirements). The requirements is for the ELNO to integrate to these numerous bank integrations not for the banks to integrate to a single ELNO interface. Based on the report estimate of 48 Person Months to deliver these Integrations (FID34B) into production this equates to 4.8 Person Months per Integration which is 2 Weeks for a squad of 10 People or effectively 1 sprint. In this single sprint the squad is expected to gather requirements, design, build, test, and deploy a fully operational production integration to a financial institution that will be relied upon to safely move significant sums of money on a system that is considered critical national infrastructure. In contrast a recent example of building payment integration was the Sympli integration to CBA. Our understanding is that this integration required nearly 12 months for a squad to complete. Significant time was spent on design, the build effort was 4-5 months and 6-8 weeks of testing. In addition PEXA engaged Thoughtworks a global leader in engineering best practices to build integration for payments to a bank in the UK and this required 12 months of effort for a full squad. Based in this empirical real world evidence the TBH report estimates are incorrect by more than an order of magnitude.	All estimates in model should be revised to reflect actual ELNO requirements.
Cost Inputs	Row 21-23	FID11 FID12A FID49	The current requirements of Land Registries stipulate that a full service ELNO must support in excess of 900 Instrument types across the jurisdictions. This includes approximately 100 instrument types still to be converted from paper to digital for electronic conveyancing that have to be included in the requirements for a full service ELNO. To achieve steady state an ELNO would therefore need to build support for 900 documents nationally. Documents vary in complexity from very complex, to structurally simple. The most complex being documents that change land tenancy (23 Nationally), medium complexity documents that alter encumbrances or other registry dealings (78 Nationally) and simple documents that provide data to land registries in a structured form (residual docs, over 800 Nationally). Based on the reports estimate of the effort required to build the instrument (document structure), capture mandatory data (data permissions / rules) and validate the document (document status rules) the total estimates of the effort for this is 632 person months. The report's estimate equates to 2.7 weeks for a 10 person squad or less than 2 sprints to gather requirements, design, build and test each very complex and medium complexity document to the point of being production ready. There is no allocation of effort to build and test the more than 800 residual documents. Real world examples of the effort to build these registry documents demonstrates that 4-6 months is required for a squad to deliver a document. Based in the empirical real world evidence the TBH report estimates are incorrect by more than an order of magnitude.	All estimates in model should be revised to reflect actual ELNO requirements.
Cost inputs	F119	Missing buil	There are ongoing Marketing/customer acquisition costs noted in cell F119 which appears to be ongoing costs. The model appears to have missed onboarding costs for an ELNO. The model have estimates for technical build but ignores that a 100% market share ELNO would have to on-board more than 10k practitioners and hundreds of banks, developers, mortgage processing providers. The MOR define prescriptive on-boarding requirements including physical f2f VOI, training, participation rules, documentation, etc. As an extension of this, the MOR define a number of ongoing obligations on ELNOs to maintain a registry of subscribers, edibility documentation, ongoing training requirements. See MOR 14 for overview of obligations in regard to onboarding and ongoing support and management of subscribers	Include in costs for building and maintaining customer onboarding as per MOR obligations
Cost inputs	Row 41 - Infr CyberCX C		Model uses $350k per annum - real costs are approx [redacted] per annum.	Revise calculation to reflect correct cost base here, in Sheet 5.2 Infrastructure Costs - Row 41 to ensure they reflect actuals.