# MainClear

Digital Transformation Agency                                      27 October 2021
Level 12 Tower B, Elizabeth St
Surry Hills, NSW 2010
By web submission

# Trusted Digital Identity Feedback

**Who we are**

MainClear Pty Ltd is a company working on new blockchain enabled services that offer superior security, cost and fraud prevention capabilities compared to legacy internet systems.

Whilst other submissions have already raised many important issues, we feel we are in a unique position to suggest some novel solutions to key risks of the current Trusted Digital Identity Framework (TDIF).

**Failing to safeguard personal information**

The current TDIF high level design, thought claimed to be 'private' and 'secure', represents a fragile legacy architecture that will likely, given the history of data breaches and the attack vulnerabilities of such systems, result in the widespread loss of Australians' private and sensitive information, undermining Australians' privacy and Australia's national security.

Unless redesigned, the system seems unlikely to meet Digital Identity's claim that "safeguarding the personal information of Users is the single most important design feature of the Digital Identity system"[1] because of at least the following:

1. **A fragile trusted third-party privacy model** – the system does not enable individuals to deal directly with Relying Parties peer-to-peer and instead, necessitates interactions through a highly centralized single point of failure (the IdX). Sole reliance on the Trusted Third-Party privacy model also introduces vendor lock-in, anti-competitive incentives, and a fragile architecture that incentivises attacks to an increasingly valuable and concentrated system.
2. **A lack of data integrity** – lacking any connection to an immutable timestamp service (public blockchain), the system does now allow any of its users to have a verifiable tamperproof chain of evidence that allows them to have sufficient confidence that the data they access through the system is legitimate and has not been tampered with.

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[1] https://www.digitalidentity.gov.au/have-your-say/phase-1-digital-identity-legislation/digital-identity-legislation-background-paper

Like many 'internet era' systems, these shortcomings result in questionable data, data breaches, a raised per-interaction cost floor, and interoperability bottlenecks that block innovation and stifle competition.

**Secure privacy services on a public immutable ledger (blockchain)**

Australia, as the home country of the inventor of Bitcoin, has a unique opportunity to become the global innovator in digital identity, privacy and the evolution of new data economies. We propose Digital Identity improves the overall security, data integrity, price efficiency, and accountability at all levels of the TDIF, by incorporating a PKI system, public blockchain, hierarchical key systems and the New Privacy Model[2] which allows fast, secure, and peer-to-peer nano-payments.

These design choices can eliminate the above two critical risks of the existing high-level design and provide Australians with a new foundational identity services layer that can unlock previously impossible levels of system interoperability, facilitating new cost efficiencies, innovation, competition and data economies for Australians and Australian businesses globally.

Please contact us if you would like to discuss further.

Yours sincerely

**Rohan Thompson, Director**　　　　　　　**Michael Parnell, Director**
MainClear Pty Ltd　　　　　　　　　　　　MainClear Pty Ltd

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[2] see section 10: Privacy, Wright, Craig S (Pseudonym: Nakamoto, S), Bitcoin: A Peer-to-Peer Electronic Cash System (August 21, 2008). Available at SSRN: https://ssrn.com/abstract=3440802