

CHES Replacement – Public Consultation Feedback Summary

CONSULTATION RESPONSE

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Contacts

For general enquiries, please contact:

Diane Lewis

Senior Manager, Regulatory and
Public Policy

T: +61 2 9227 0154

E: diane.lewis@asx.com.au

For media enquiries, please contact:

Matthew Gibbs

General Manager, Media and
Communications

T: +61 2 9227 0410

E: matthew.gibbs@asx.com.au

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EXECUTIVE SUMMARY

CHES is the system that performs, the functions of clearing and settlement and a range of other services. CHES continues to operate well - with average monthly service availability of 99.99% for the last 5 years - and can continue to do so for several more years. Notwithstanding this, ASX has begun the process of evaluating the options to replace the CHES system with more contemporary technology. The objective is to implement the next generation platform that provides a range of benefits to users to reduce costs, risks and enable innovation.

In September 2016, ASX commenced consultation with the release of the consultation paper 'ASX's Replacement of CHES for Equity Post-Trade Services: Business Requirements' (the Consultation Paper). The objective of the Consultation Paper was to provide the market with an update on ASX's evaluation of Distributed Ledger Technology (DLT), set out ASX's preliminary thinking on the business requirements for a system to replace CHES, and to seek initial views from users on their business requirements.

Consultation Feedback

In response to the Consultation Paper, ASX received 36 written submissions, including 23 that were provided on a confidential basis. ASX convened a number of roundtable follow-up discussions and bilateral meetings with respondents to the consultation in December 2016 to confirm and clarify the feedback received.

ASX also undertook over 50 demonstrations and more detailed workshops with users and other stakeholders throughout August to December 2016 in ASX's purpose built demonstration suite, 'acceler8'. The purpose of the demonstrations and workshops was to showcase the DLT prototype and conceptual architecture so that users could see DLT's capabilities when providing feedback to ASX on what they wanted from the replacement of CHES

This paper provides a summary of the feedback provided by respondents in their written submissions and also the consultation meetings undertaken since August 2016¹. It also outlines the key actions that ASX is undertaking in response to the feedback. This paper does not provide a complete record of everything raised in the written submissions or consultation meetings. A more detailed summary of the responses to the consultation is included in Attachment A.

The consultation responses have highlighted that there are some common themes upon which respondents broadly agreed, and other areas where there are differing perspectives and views. Respondents also indicated that additional information and detail was required in order for them to fully assess the benefits of particular business requirements and to provide detailed feedback. This is to be expected at this early stage of the consultation process. ASX is committed to undertaking additional consultation as this project progresses.

Some respondents raised complex issues that would require support from a number of different users in order to make changes to existing market practices. These extend beyond the functionality of the CHES system and ASX will explore this further with users throughout 2017.

ASX would like to thank respondents for their comprehensive and constructive feedback and looks forward to continuing to work with all users in 2017 on the business requirements for the replacement of CHES.

¹ Paper does not include feedback from the December 2016 Supplementary Consultation Paper

All public, non-confidential CHES Replacement Consultation Paper responses are available at <http://www.asx.com.au/services/chess-replacement.htm>.

Summary of next steps

The paper outlines the next steps in the business requirements gathering process. This includes a detailed action plan which has been incorporated into a forward work program of engagement with users. The actions include:

1. Deep engagement with clearing and settlement participants - as key users, ASX will continue to consult with them and their service providers both bilaterally and through the Business and Technical Committees.
2. Engagement with other users - CHES is used by a broad set of users that includes listed companies, investors, and their peak representative bodies. ASX will engage with them both bilaterally and through formal consultation in 2017.
3. The formation of six specific user working groups to identify, define and prioritise business requirements.
4. Ongoing demonstrations of the Distributed Ledger Technology prototype - to enable stakeholders to understand its potential uses and to help users prioritise what new features they would like to see in the replacement of CHES.
5. Further formal public consultation.

Respondents were strongly supportive of continued engagement through consultation and ASX remains committed to listening carefully to the users of CHES as the business requirements for the replacement platform are developed throughout 2017.

Importantly, the work to refine the business requirements, including the use of ISO 20022 messaging standards, is re-usable regardless of the technology that is ultimately used to replace CHES. ASX also continues to assess the DLT technology through building base-level DLT equity post-trade functionality to test the enterprise-grade capabilities of DLT (e.g. scale, speed, persistence, security). ASX remains on track to bring together these findings with the development of the CHES replacement business requirements in order to make a decision on the roadmap for CHES replacement at the end of 2017.



CONSISTENT CONSULTATION FEEDBACK

Respondents provided consistent feedback on some matters, albeit there is still a significant amount of work necessary to determine the relative priorities as users see them.

This section sets out the areas where consistent feedback was provided by a range of respondents.

Support for adoption of international standard messaging

The majority of respondents were supportive of the adoption of international messaging standards (ISO 20022) and indicated that they understood the operational efficiency benefits that can be delivered by the use of such standards. The application of proven global standards was considered by respondents as 'best practice'.

While there was widespread support from respondents for the adoption of international messaging standards, there was also broad agreement on the need to resolve transition arrangements from the existing CHES messaging format in a way that managed the impact for users.

Respondents are seeking more detailed information on ISO 20022, including how CHES messages will be translated into the ISO 20022 standard, and what transition arrangements will be available to facilitate implementation.

Action plan 1 - Implementing international message standards

In response to the feedback, ASX has:

- a) Committed to adopt ISO 20022 messaging standards for the CHES replacement system, regardless of which technology is chosen for the replacement system.
- b) Provided a [dedicated section of the website](#) to the ISO 20022 work stream, including a free eBook for users on ISO 20022.
- c) Commenced work with the ISO 20022 Technical Committee² and has committed to undertake workshops with users to validate the proposed ISO 20022 messages as replacements for CHES messaging and to discuss transition arrangements. Two Committee meetings have already been held and will be ongoing in 2017.
- d) Committed to provide updates to the Business Committee on the progress of the ISO 20022 Technical Committee in working through the detailed mapping and implementation of ISO 20022 messages.
- e) Engaged SWIFT consultancy expertise to assist with the CHES to ISO 20022 message development and lodgement to the International Standards Organisation.

Support for 'Day 1' functional changes that reduce intermediaries operating costs

Clearing and settlement participants have indicated a strong support for the system that replaces CHES to provide for a suite of 'Day 1' functional changes aimed at significantly reducing their costs.

² Details of the Committee including its purpose and objectives can be found at <http://www.asx.com.au/services/ches-replacement.htm>

These respondents are focused on automating processes, including replacing paper based and manual processes to support corporate actions, account transfers and securities conversions, to deliver operational efficiencies and reduce risk and associated costs. This requirement was identified as a high priority by a number of respondents.

Action plan 2 – Delivering operational efficiencies

ASX will work with the Business Committee and other Technical Committees and will create working groups to capture specific requirements and the impact of such changes. This will include the following:

- a) Corporate Actions – process changes to improve efficiencies and reduce risks within corporate action processing.
- b) Security transfers and conversions – changes to reduce risks and streamline processes associated with transfers and conversions to the extent that these are within ASX's control.
- c) Others topics as identified though further consultation and discussion.

No significant concerns with DLT

No significant concerns about using DLT as a possible technology foundation for a CHES replacement system were raised by respondents. Respondents were generally supportive of ASX investigating DLT as a potential replacement technology for CHES. However, there was widespread interest expressed by respondents in being provided with more information on DLT, including how it works and what its potential application to post trade processing might enable.

Action plan 3 – Continue to demonstrate the capabilities of DLT

In order to demonstrate the capabilities of DLT, ASX has:

- a) Developed a DLT prototype equity post trade application.
- b) Built a dedicated demonstration suite to explain DLT and to use the prototype application to illustrate what might be possible.
- c) Conducted over 90 stakeholder presentations and workshops to over 400 people from a range of stakeholders.
- d) ASX will continue to provide demonstrations throughout 2017 to a wide range of industry stakeholders.



MIXED CONSULTATION FEEDBACK

Respondents provided some feedback that differed depending on their business model or individual priorities. For example, domestic retail private client service providers often expressed different views to those of large global investment banks focusing on institutional clients.

The areas where there were the most notable differences in feedback are included in this section.

Transition from CHESSE messaging to ISO 20022 messaging

A significant number of respondents support the coexistence of CHESSE and ISO 20022 messaging for a transition period, while others expressed a desire for a 'hard cutover'.

Respondents who indicated a preference for a period of parallel message support typically cited this as a measure to allow them to slowly transition from CHESSE to ISO 20022 messaging and progressively educate their staff in the new ISO 20022 format.

A majority of back office software vendors to the industry highlighted the complexity and increased risk of supporting two message formats in parallel, and indicated a desire for a 'hard' cutover date. These respondents also highlighted that they either already do or will offer support for ISO 20022 messaging services to their existing and new clients.

Action plan 4 – Designing effective transitional arrangements

ASX will undertake further work to provide greater clarity on the impacts to operational workflows of ISO 20022 to facilitate a decision on the nature of transition from CHESSE to ISO 20022 messaging. Given the differing views on transition, ASX has included this as a topic for the Technical Committee to consider.

Settlement period choices

There were mixed views provided by respondents on the question of whether the system that replaces CHESSE should provide settlement period choices. There was also a general desire for further information on how the provision of settlement period choices would work in practice.

Some respondents saw clear benefits for investors who could be offered a choice of an earlier (than T+2) settlement period. Others indicated there would be no net benefit to them of offering additional settlement period choices. Many respondents also noted that there would likely be impacts to settlement liquidity and the operational efficiencies afforded by a single batch settlement process.

Respondents who did indicate support for the ability to choose a shorter settlement period cited as benefits the removal of risk exposures, reduced margin obligations and potential reductions in the size of the ASX Clear default fund that could translate into lower ASX fees for clearing participants. Some cited the benefits for a retail investor having the ability to sell their securities holdings intra-day and use the proceeds immediately for other purposes.

Business opportunities in providing securities lending or liquidity channels to support flexible settlement periods were also identified by several respondents.



Action plan 5 – Reviewing settlement models

ASX proposes to provide additional information and facilitate further industry discussion on a business requirement that provides for optional early settlement. This includes:

- a) Creating a Settlement Enhancements working group and adding settlement optionality as a topic to be discussed.
- b) Providing a hypothetical high-level early settlement model to this working group to allow for more detailed scenario discussion and analysis.

The exact timing and sequence will be determined once the priorities of the other business requirements that respondents have expressed interest in have been assessed.

Account structures and participation models

A number of respondents commented on changing existing market structures relating to how securities are held and registered, and as to whether there was enough flexibility in ASX participant categories to facilitate different business models in clearing and settlement.

While the introduction of CHES successfully facilitated the electronic ownership of shares via either a Holding Identification Number (HIN) or a Security-holder Reference Number (SRN), which are respectively held on the CHES sub-register and the Issuer sub-register, respondents highlighted the operational inefficiencies, risks and costs associated with supporting SRN's and the compliance costs and inefficient portability associated with HINs as issues that needed addressing.

Some respondents also wanted to explore the continued viability of a name on register approach to security ownership and whether a central securities depository model should be considered.

The decoupling of clearing and settlement functions at a participant level, and the introduction of a principal to principal clearing model were mentioned as areas for consideration.

Action plan 6 – Reviewing account structures and participation models

In response to the feedback, ASX will facilitate further industry discussion on:

- a) Account structures to register the ownership of securities.
- b) Name on register versus a central securities depository model.
- c) ASX participant categories and changing business models.

Any changes in this area will require a broad consensus amongst a diverse group of users. ASX notes that such changes extend beyond the functionality of the CHES system and its replacement.

Differing priorities on potential functional system enhancements

Respondents suggested a number of potential functional system enhancements including but not limited to corporate actions, settlements and enhanced reporting services. There were mixed views on the relative priorities for these potential system enhancements amongst respondents.

The new and enhanced services suggested by respondents in their submission are set out below.



Corporate actions

- Enhanced voluntary corporate action and income event management – electronic lodgement and election and real time payments. Real-time electronic acknowledgement of receipt.
- Expand corporate actions event detail to include tax treatment of income and any restrictions on participation.
- Functionality to lodge, and have validated, electronic proxy voting – so that it is available when legislation is enacted.
- Corporate Action entitlement sub-balances to be abolished and replaced with a security representing the entitlement.

Settlement enhancements

- Allow linking of turnaround settlements by participants.
- Enable the scheduling of bilateral DVP settlements outside of normal batch settlement times.
- Eliminate the need for deferred trading and the subsequent settlement of new securities. Holdings and transactions to automatically translate to new securities on applicable dates.
- Underlying client information should be able to be submitted to allow for more detailed settlement information to be provided to counterparties and at client settlement.
- Mandate use of additional unique matching criteria for free of payment securities movements across participants.
- Linking of the New Payments Platform (NPP) to CHESS particularly given both will use a common standard messaging protocol in ISO 20022.
- A move to T settlement with payment and receipt of funds facilitated through the New Payments Platform (NPP).
- Keep the mFund application and redemption process in the post trade space as opposed to requiring ASX trade dependencies.
- The addition of clearing obligation “give up / take up” capability for cash market.
- Enhanced stock loan borrow functionality to track corporate action accruals and mark-to-market obligations.
- Unbundling of clearing and settlement participations and messaging to support the unbundling.
- Depository model (i.e. Nominee) as opposed to the current name on register model.

Transfers, conversions and data migrations

- Eliminate paper transfer of securities – such as SRN to CHESS, creation and redemption of ETFs, and movement of securities from other market (e.g. New Zealand).
- Review existing basis of movement identification.



- Provision of alternatives to bulk-messaging for transfers of clients and positions.
- Provide a transparent method of securities code allocation (ASX/ISIN) to facilitate new issues.
- Utilise smart contracts to ensure all aspects of transfer of ownership occur in a controlled manner.
- Enhance HIN transfer messaging e.g. allow changes to the registered name with no change in underlying beneficiary.
- Simplify the means to effect Free of Payment movements (i.e. there are currently multiple methods – CHESMT 005 and 101).

Data storage, delivery and reporting

- Permanently store the client TFN/ABN and banking details of each participant.
- Real-time participant reporting including securities on loan, transactions, etc.
- CHES Statement in electronic formats including emails with rich text (hyperlinking) capability accessible through industry standard APIs.
- Capture and storage of information for regulatory purposes (e.g. to support foreign tax requirements).
- ATO transaction reporting obligations. Access to data by ATO, rather than participants providing the information.

Non-functional requirements

- Visibility into the business continuity plan for ASX as well as clear business continuity requirements for participants to adhere to.
- Provision of multiple end-to-end integrated test environments, including synchronisation with ASX Reference Point and with the ASX Trade test environments.
- Facilitation of out-of-hours development and testing support via a 24x7 end-to-end integrated test environment.
- A login-based connectivity model. Allow multiple parallel connections under different logins via single connection.

Action plan 6 – Forming Working Groups to identify priority functional enhancements

To the extent that these fall within the scope of CHES replacement, these topics will be added to the forward plan of work. ASX will form 6 specific working groups to facilitate the discussion, analysis and capture of business requirements. These are as follows:

1. Account Structures and Participant Models
2. Corporate Actions
3. Transfers, Conversions & Data Migrations
4. Settlement Enhancements



5. Data storage, delivery and reporting
6. Non-Functional Requirements

The objectives of these working groups is to identify, define and prioritise the business requirements for users in each of these areas by the end of 2017.

CONSOLIDATED WORK PLAN

The six action plans detailed in the preceding sections will be consolidated in the Forward Work Program. The forums and mechanisms to execute this work program are summarised below and are presented in the accompanying diagram called “2017 CHES Replacement Business Requirements Forward Work Program”.

Code of Practice Business Committee – This will continue to be a key input and discussion forum for clearing and settlement participants, market operators and key industry associations. The frequency and duration of these meetings has been increased.

Technical Committees – Will focus on the various facets with the transition to ISO 20022 messaging standards.

Consultation Paper(s) – Beyond the initial Consultation Paper that this paper is responding to, if required additional consultation papers will be presented.

Questionnaires – A supplementary questionnaire has already been presented to industry. Should others be required they will be presented.

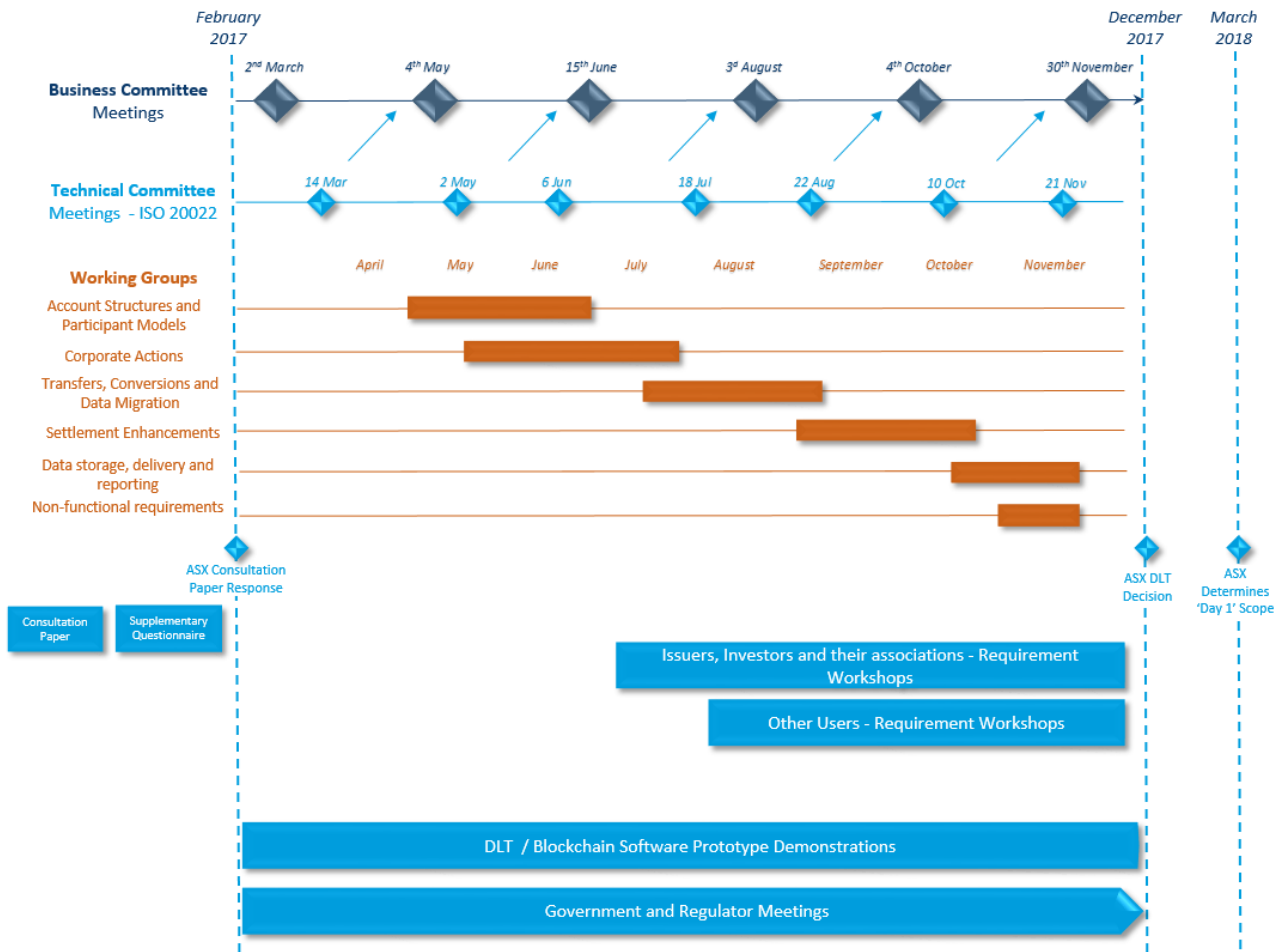
Workshops – These remain a key source of valuable input to business requirements as they allow focused, targeted discussion on particular topics addressing both industry and individual firms’ business requirements. As such, ASX will continue to offer industry and bilateral invitations to business requirement workshops.

Status Updates – The CHES Replacement website, quarterly webinars, stakeholder emails and ASX announcements where required will be used to broadcast progress updates.

Software Demonstrations – The existing DLT prototype and conceptual architecture presentations to explain DLT and its potential application benefits will continue throughout 2017.



2017 CHES Replacement Business Requirements Forward Work Program



Details of the Forward Work Program and the ongoing stakeholder engagement process will be regularly updated at the dedicated website located at <http://www.asx.com.au/services/ches-replacement.htm>.



ATTACHMENT A – SUMMARY OF FEEDBACK IN RESPONSE TO CONSULTATION QUESTIONS

Question 1 – Are there any other key business functions provided by CHES that have not been identified in this paper that should be supported by the system that replaces CHES? Explain the importance and value of any such business functions to you.

There was broad agreement that the majority of existing key functions were covered, but several submissions raised the improved functionalities for existing services that were important to them and omitted from the original consultation paper.

For example, a number of respondents expressed the view that the corporate action event process is cumbersome, overly manual (and therefore high risk) and varied dependent on share registry involved. These respondents saw opportunity for the industry to reduce these associated inefficiencies, costs and risks. The ability for participants to notify elections electronically was expressed as a 'Day 1' release preference.

Requests received to also increase focus on opportunities to address market inefficiencies in asset registration processes (e.g. transfer and conversion processes) and market structure for asset sub-registers (CHES and Issuer).

Some custody participants believe moving the settlement batch into later in the day would cause issues, particularly in servicing offshore based customers (asset servicing and voluntary event processing). However other submissions expressed some interest in exploring additional settlement models, for example the ability to settle line by line - Model 1 Delivery versus Payment (DvP) during the period after the batch settlement.

Question 2 – What are your views on ASX implementing only a limited suite of business function and service enhancements in the replacement of CHES, in order to minimise risk and disruption to the market?

A range of stakeholders indicated support for incorporating all existing functions in the replacement system to limit disruption to existing processes.

Many submissions indicated a strong appetite for more ambitious 'day 1' functional and service enhancements. Some indicated that without significant upfront process efficiencies that could deliver real savings (in productivity increases, cost and risk reductions) the implementation costs of transitioning to a new system would make the economics of change unattractive. Customers indicated they would like the opportunity to choose from a range of services.

System vendors noted the early introduction of new functions over staggered release cycles could add to the overall implementation costs (for them and their customers).

That said, some submissions did acknowledge the potential implementation risks associated with introducing a number of changes at the same time.

A number of submissions noted that it was difficult to assess the impact on their businesses without additional detail on the precise nature of the ASX approach (particularly on new potential features).



Question 3 – What are your views on each of the potential business functions and service enhancements identified in the paper for implementation with the replacement of CHES?

There were mixed levels of support across respondents in relation to potential functions that seemed to reflect their own business model and priorities. There was wide spread interest in the potential benefits of enhanced real time data services and varying levels of support and understanding of settlement period optionality and the opportunities it may present.

Access to settlement infrastructure by a second CCP

Submissions generally acknowledged that regulatory obligations require CHES replacement to address the need to accommodate alternate financial market infrastructure in an efficient manner. Although several participants expressed concerns about the potential costs and lack of clear benefits associated with a multi CCP structure. Other submissions questioned how access and technical connectivity would operate.

ISO 20022 messaging protocol

There was broad acknowledgment from most participants (particularly global/multi market organisations) of the benefits of moving to an international standard protocol.

However a number of domestic and/or retail participants believed the introduction of the new messaging standard may involve a medium to large implementation cost to their firms without delivering offsetting benefits. As such they could not actively support the change in the absence of more details on the cost of change and operation.

Many expressed the view that they were not familiar with ISO 20022 and there would be a need for significant education to ensure a smooth transition.

Legal name on title throughout settlement/remove need for accumulation HIN

Varied support and understanding for the elimination of the settlement accumulation HIN. A number of participants felt risk to clients were already sufficiently mitigated with the introduction of the Financial Stability Standard (FSS) changes in May 2015. However, some other respondents felt the change could provide additional benefits in protecting client assets.

One institutional participant felt there would be limited support from other institutional participants as they pool securities and release for settlement on a net basis only as and when required.

An industry association raised concerns over whether the PID and HIN model would remain. Without 'control' of clients through this, there is no off-set benefit to support all the administrative responsibilities.

A custody participant made comment that subject to a decision to 'de-omnibus' some/all of their clients holdings they would need considerable review, as this change may add significant degree of operational risk and cost to their post-trade settlement asset servicing.



Expand security encumbrance capability

There was some support for this proposal from a wide range of respondents on the basis that they could see some value in further improvement to the security of investors' holdings.

In contrast, some participants felt any expansion of this capability would not provide meaningful benefit for them or their clients and therefore did not consider this change as a high priority.

There was some support from custodians for settlement participants being able to lock or segregate their clients' holdings, however they felt that this would not align with future market rules mandating further encumbrances.

Settlement period choices

There was a range of levels of support across respondents for the general proposition. However, there was consistent comment in submissions that greater discussion and clarity is needed as to how this will work in an operational sense, before stakeholders can reach a final position on the costs of benefits of different options.

Some respondents saw potential benefit in this service offering, noting possible capital and margin improvements but were unsure about the impact to netting efficiency and operational change/risk. Others did not support the proposal on the basis that they expected limited demand from clients for such a service and they believe it would add significant complexity and loss of efficiency to the settlement process.

On the other hand, one submission cautioned against maintaining a single settlement batch model, on the basis that a multi-batch or DvP model can deliver greater flexibility to investors and market participants.

Some saw a move over-time to T+1 settlement as delivering these benefits without the greater complexity that offering a range of settlement choices might involve. Others expressed interest in exploring options beyond a single batch settlement model, for example the ability for line-by-line settlement after the normal batch settlement on a day.

Several participants expressed the view that settlement date flexibility has the potential to provide benefit to some participants and their clients, but cautioned around how such a model might impact funding requirements, the stock lending community and operational efficiencies.

Real time data and service access via API

Wide support was received from the industry for the provision of flexible and timely access to data. However, the net benefits would be dependent on the precise functionality and any costs associated with the service.

Share registries also expressed interest if the service could allow them to provide their Issuer clients with reporting and analytics in a timelier manner, which is currently delayed by end-of-day batch processing constraints.



Question 4 – Would you expect the business functions and service enhancements identified in the paper to provide a net benefit to your organisation, and if so, how would you categorise the significance of the net benefit - small / medium / large? If possible, please provide a quantification of any net benefit.

A consistent comment from most stakeholder groups was made on potential benefits being present, but difficult to quantify given the level of information given. The net benefits anticipated typically varied dependent on the respondents' own existing business model and current needs. A number of respondents felt the overall net benefit would be at the lower to medium end in the shorter term, however positive feedback and support was received from many respondents on the removal of paper-based CHESS statements.

Custodians advised their members did not see any significant benefit and cost savings in some of the new functions highlighted – with the exception of ISO 20022 messaging. They expressed a concern that implementation costs may be more than the benefits realised in the short term. They offered alternative feature and service suggestions including; enhanced voluntary corporate action processing; proxy voting services; the elimination of paper transfers of securities and deferred trading.

In the main, participants' back office software system vendors anticipated no immediate direct benefits to their businesses. They anticipated implementation costs and effort may be significant, but could not quantify these until greater clarity is provided.

Question 5 – Are there other business functions and service enhancements that are consistent with ASX's guiding principles that have not been identified and which you think should be considered as part of the replacement of CHESS?

Many submissions expressed a broad expectation and desire that CHESS replacement would include enhancements in corporate action and proxy voting related functionality. In particular, enhanced ability to reduce paper-based processes through greater use of electronic messages and STP processes where possible around elective corporate actions, conversions and change of investor details, as they can deliver significant cost and efficiency savings for the industry.

Several respondents also mentioned that consideration should be given to including the current fixed income services managed within Austraclear in the CHESS replacement solution at some point to deliver process efficiencies to those arrangements.

The participant community also voiced wide support for the removal of paper CHESS statements to customers and their replacement with more timely electronic statements.

Question 6 – Are there any non-functional requirements or connectivity models you would like ASX to consider for the replacement of CHESS?

Custodians stressed the need to minimize CHESS downtime to enhance flexibility and service standards for participants, especially those firms with offshore clients/investors. This could include, for example, reducing the time taken to process batch settlement or offer the ability to submit settlement messages during the batch process.



Several respondents requested that consideration be given to an enhanced back up capability (disaster recovery plans with rapid failover capabilities) and improved test environments and associated access. Respondents also stated that any replacement system must be able to demonstrate that it can meet increased performance and volume benchmarks while ensuring the current and future security issues are well managed.

Several participants strongly supported using CHES replacement to examine the opportunities to reduce the regulatory requirements on participants. For example, allowing regulators access to system data to conduct surveillance activities and removing the need for participants to provide data.

One institutional participant raised the need to ensure non-functional requirements are supportive of applications which may be hosted outside of Australia.

Question 7 – Would you expect the adoption of ISO 20022 messaging standards to provide a net benefit to your organisation? If so, how would you categorise the significance of the net benefit – small / medium / large? If possible, please provide a quantification of the expected costs and benefits of the implementation of ISO 20022 messaging standards.

A majority of respondents support the adoption of a global standard, alignment with Australia's New Payment Platform (NPP) messaging standards and other market communication standards. There were a range of views across global and domestic stakeholders, on the initial migration expense, expected benefits and cost savings.

Some domestic only participants suggested that a change to the ISO 20022 standard will purely be a business cost with limited gain. However most institutional participants felt ISO 20022 adoption would allow them to consider other global settlement solutions for the Australian market. These respondents believed that this could significantly reduce their operating costs. For example, using the same messaging standard in Australia that these firms are using on other jurisdictions would provide the opportunity to reuse existing global infrastructure and leveraging existing SWIFT and ISO capabilities to potentially remove duplicated local infrastructure.

Some system vendors could see no direct benefits to their business. These vendors currently supply their clients with CHES message connectivity solutions. All these back office software vendors emphasized that they either already support or would in the future be in a position to offer connectivity solutions to an ISO 20022 message set.

Question 8 – How important is it to your organization that ASX continues to support CHES messaging for a period of time to allow for your organization's transition to ISO 20022 standards?

There was strong support to maintain existing CHES messaging through a transition to ISO 20022 messaging (as opposed to a big bang approach), but a number of submissions stressed that this shouldn't be allowed to delay any new services offered on ISO 20022.

Participants servicing retail clients stressed the importance of maintaining CHES messages, or establishing a CHES-ISO translator, for an agreed period to manage the transition to the new standard. Many participants highlighted their general reliance on their back office system vendors to assist with the transition to a new messaging standard.



Question 9 – ASX currently supplies and supports two client-side CHESSESS messaging gateways – CHESSESS PC and CHESSESS Access. Are you a user of either of these services? If so, which gateway do you use?

Five respondents indicated that they use CHESSESS PC and two use CHESSESS Access.

Question 10 – If you are a user of CHESSESS PC or CHESSESS Access, would you be seeking continuation of this gateway service from ASX (for either CHESSESS or ISO 20022 message suites)?

The participants using ASX user interface options (CHESSESS PC and CHESSESS Access) suggest that such gateways should be maintained as an economical option for some participants.

Question 11 – Does your organization have the capability to support and migrate to ISO 20022 messaging now? If yes, what business categories do you use? If your organization does not currently have this capability, does it have plans to implement it in the near to medium term?

ISO 20022 knowledge and skills varies greatly across the respondents. A limited number of participants would have capability to support a migration to ISO 20022 at present (these were mainly global institutions), but there is broader support to migrate in future – although many will rely on their back office software vendors' readiness to support the transition to ISO 20022.

A number of participants are currently familiar with ISO 15022 messages and indicated that this should make the transition to ISO 20022 easier, assuming there is significant alignment between the information contained in the ISO 20022 and ISO 15022 messages

Question 12 – If ASX was to mandate the use of ISO 20022 securities messaging, how long would your organization need to migrate to ISO 20022?

Respondents indicated the time to prepare for ISO 20022 messaging was difficult to predict without more detailed information on the number and nature of the messages to be introduced. However, respondents' estimates ranged from 6 months to 3 years.

Question 13 – Do you have a preference about the approach to the implementation of ISO 20022 messaging - for example, a big bang approach or per business function or other?

Preferences varied across respondents. A majority of respondents stated a preference for a more cautious phased approach to reduce the impact to the market given the size and scope of the change. However, there were some that preferred a 'big bang' approach – citing the complexity and associated risk of running two different messaging protocols in parallel for a period.

Several custodians indicated a preference for a 'big bang' approach, but acknowledged that this may cause difficulties for some firms and that the option for organisations to still use CHESSESS messaging for a period of time may be a reasonable compromise.

Mixed opinions were expressed from back office system vendors on the approach to be taken, with all requesting on-going consultation before a final decision is made. They all requested a comprehensive testing and accreditation process as part of the implementation plan.



Question 14 – Does your organization have a preference for the network used for ISO 20022 messages - for example, SWIFTNet, ASX Net or other?

There was broad support for multiple connectivity/network options being available to participants. Respondents requested more information on the proposed system and market architecture before providing more detailed commentary on any connectivity requirements, benefits and costs.

Respondents indicated that whilst choice of network was important, the reliability and cost of the network connection was vital for participants.

Custodians confirmed their support for the use of SWIFTNet for ISO 20022 messaging.

Question 15 – Please provide your views on the potential enhancements and new services identified in this paper. Would these enhancements and new services be beneficial to your organization?

Respondents indicated that the suite of proposed enhancements could have a significant impact on industry and bring with it some unintended consequences as well as providing opportunities. Many submissions requested additional details on the options to gain a better understanding of the potential costs and benefits

Some participants stated that the enhancements and new services proposed in the paper do not fully address the key areas that would provide more immediate benefit to their organisations. Many respondents indicated the options were a much lower order priority than the removal of any manual processing activities and associated risks - corporate actions and asset registration efficiencies in particular.

Multi-currency capability

There was acknowledgement that this functionality would be of benefit to most stakeholders, particularly the larger global organisations but less so for smaller retail/domestic participants. It was generally considered a lower order priority.

Multi-asset class capability

Several respondents were in favour of expanding beyond cash equities to include other asset classes in the CHES solution due to the ability to have cross product netting thereby allowing efficiencies across equity and derivative products with a potential reduction in risk, improved netting efficiency and reduced costs.

Centralised capture and storage of information

Most respondents indicated broad support for a centralised database of required regulatory client information that could be made available to regulators and other relevant government bodies. However, some submissions questioned if the mandatory centralised capture and storage of KYC and AML information in the CHES replacement system, would be the most efficient solution. Some argued that it may just duplicate existing processes already in place, while other thought a single repository covering all financial services (i.e. beyond just equity securities) might be a superior model.



Other potential enhancements discussed in submission included:

Issuer and Broker Sponsorship

While there was a broad consensus on the need to fundamentally improve the process of transferring securities between the broker and issuer sponsored registries (and between different sponsoring participants) there was a significant difference of views on whether more fundamental change is necessary, and if so, what it may look like.

Ideas ranged from removal of the issuer sponsored register to removal of broker sponsorship of HINs.

There was however a general recognition that any change would involve a significant impact across the industry and would require substantial industry-wide dialogue to consider the implications of any change in this area.

Austraclear

There was some support for the inclusion of Austraclear into the CHES replacement system at some point, citing the potential to improve the processes in managing fixed interest holdings and to reduce the duplication of systems. It was recognised, however, that the different nature of how securities are held in the two systems would require significant analysis to determine if, and how, it could be achieved.

Question 16 – Please outline any additional significant functional enhancements and new services that your organization thinks should be considered.

Other Financial Instruments

A respondent expressed a desire to include products such as over-the counter (OTC) derivatives and term deposits in the new system in order to consolidate investments on one single book of records.

Australian Managed Funds

Some respondents highlighted that managed fund processing remains highly inefficient and still relies on paper based instructions and faxes and thought CHES replacement could potentially offer a solution. The broadening of the mFund service could provide a trigger to justify such an approach.

On the other hand, some respondents did not see mFund as being a core clearing and settlement service, as a significant number of participants do not currently support mFund, and could be de-scoped from the project to lower the overall cost and risk of the project.

International Markets

One participant raised the issue of whether, in the longer term, the system that replaces CHES could facilitate post-trade services for retail investment in international securities.



Issuer services

A share registry respondent suggested that the ability to directly initiate and update address details for CHES broker sponsored holders and that the issuer's registrar should receive detailed address information upon the establishment of a CHES holding. They would also like real time gross movements to CHES holdings in place of the current net end of day reporting. There was a proposal to introduce functionality that would allow optional submission of instructions to the share registry on a number of voluntary corporate actions.

Reduced Handling of Client Cash

A retail participant suggested enhanced integration to the banking system and aligning cash settlement to the stock settlement process. This was consistent with the view put by a systems vendor advised of a trend in some markets away from participants handling client cash through greater integration with banking systems.

Daily Cash Market payment

One participant asked for simplification of the acceptance and transfer of funds to settle the daily cash market margin (CMM), in that it should be similar to the current batch settlement process.

DvP matching settlement tolerance

A respondent suggested an increase in the dollar tolerance for matching DvP settlements, eliminating the need to cancel some unmatched messages.

Pre-matching service

Another participant stated they would like a pre-matching service, rather than the 'spray and pray' model currently used - scrapping the 'locked into settlement' model. Pre-matching a counterparty to ensure all settlement variables are agreed (similar to Japan, HK and the US).

Question 17 – Do you have any other comments on the matters discussed in this paper?

There was consistent feedback from a majority of respondents that they wished to continue comprehensive engagement with ASX and be consulted both formally and informally throughout the CHES Replacement process.

Additional comments made in submissions included:

Fee Structure

A submission requested that ASX do a thorough analysis of its clearing and settlement fee structures and many submissions indicated that CHES replacement should lead to a significant reduction in both ASX clearing and settlement fees and indirect industry costs.



ASX Clearing and Settlement Services

A few submissions suggested a clearer demarcation should be made between four services performed by ASX's CHES and related systems. These services include; Settlement, Asset Registration, Clearing and Issuer Administration.

Alternate market operators (AMOs) indicated that the design of the CHES replacement system should be decoupled from the ASX trading infrastructure to ensure that post trade services (including the processing of corporate actions) are made available to all market operators on the same basis.

Roadmap / Timeframes

Respondents expressed a broad desire for an indicative roadmap to implementation that would allow impacted stakeholders to plan, schedule and budget for required resources.

DLT solution - Correct approach / Security approach

Most respondents requested that ASX continues to keep the market well informed of any potential application of distributed ledger technology (DLT).

Governance & Independent Validation of distributed ledger technology (DLT)

An industry association was of the opinion that the Business Committee should be required to endorse ASX's decision to implement DLT, along with core principles and timeframes for CHES Replacement.

Alternate CHES Replacement approach

A number of respondents were of the opinion that ASX should detail alternative CHES replacement options should DLT not be proceeded with.

CHES statements

One respondent suggested a move to digital CHES statement dissemination could be treated as a stand-alone project to CHES Replacement. A move away from paper based statements was welcomed by most respondents.

Relationship to the Exchange Traded Options (ETOs) Derivatives Clearing System (DCS) Replacement Project

Several stakeholders expressed surprise that DCS replacement was not included in the scope of the cash equities CHES replacement project. Some respondents expressed an interest to know whether there were plans to establish a common clearing platform for options and equities.

