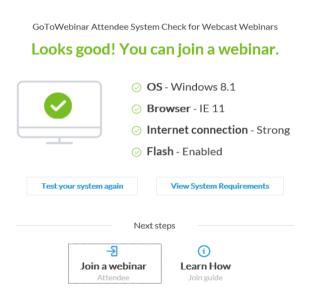


Housekeeping: trouble shooting

- Check your system requirements
- Audio options:
 - Use your computer's mic and speakers ("Computer audio").
 Check that your computer's audio is unmuted
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 - Access code: **876-590-247**
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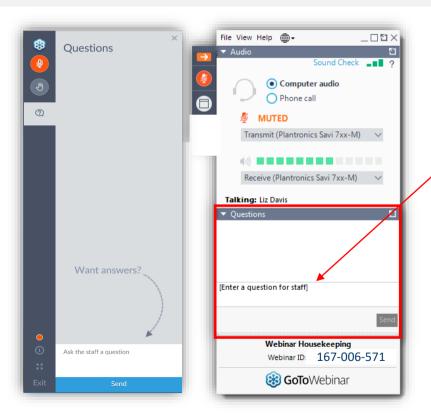
Further information:

https://support.goto.com/webinar/how-to-join-attendees





Housekeeping: how to submit questions



Your Participation

- To submit your text questions and comments use the Questions panel
- Note that your questions will not be seen by other attendees

For more information - refer to the webinar tips published on the ASX <u>CHESS</u>
<u>Replacement web page</u>



Agenda

- Overview of ASX's response to consultation feedback
- Feedback received from the consultation process
- Other considerations outside the consultation process
- Confirmed implementation timetable
- Additional information required by CHESS users
- Ongoing independent project assurances
- Q&A
- Next steps



Presenters and introductions



Timothy Hogben
Chief Operating
Officer & Executive
Sponsor CHESS
Replacement
project



Katie McDermott General Manager, Equity Post Trade Services



Keith Purdie
Senior Manager,
Equity Post Trade
Services



Triona Quinlan
Program Manager,
Customer &
Business Readiness



Overview of ASX's response to consultation feedback



Overview

Introduction

- > On 25 March, ASX announced it was undertaking a replan of the CHESS replacement system to accommodate:
 - The impact of the COVID-19 pandemic
 - Functional changes requested by CHESS users
 - Additional time for ASX and CHESS users to complete development and readiness activities.
- > On 30 June 2020, ASX released its paper for a 4 week consultation period on the CHESS Replacement revised implementation timetable with a proposed April 2022 go live date
- > ASX sought feedback to five questions:
 - 1. Can your organisation meet the revised implementation timetable with a go-live date of April 2022?
 - 2. If you answered No to Q.1, what are the challenges for your organisation in meeting the timeline?
 - 3. If you answered Yes to Q.1, are there any dependencies that ASX should be aware of, and what would be the impact to your organisation of a delay beyond April 2022?
 - 4. If your organisation chooses to provide feedback on the rule amendments, can your organisation meet the revised timetable for providing feedback on the further rules consultation commencing in early Nov' 2020?
 - 5. How long after the go-live date would your organisation be ready to commence readiness activities (inc. technical accreditation and operational readiness) for features included in release 1.1?



Overview

Introduction

- > ASX has carefully considered the consultation feedback from 100 organisations (96 CHESS users and 4 industry associations) as well as more recent feedback in relation to industry expectations for systems scalability and capacity following the extreme volumes in March
- > ASX has also undertaken a comprehensive review of the project and consulted with regulators
- > This has resulted in more functionality, capacity, scalability, industry testing and more time for everyone (including ASX) to get ready go live is confirmed as April 2023



Feedback received from the consultation process



Consultation feedback

High level summary of key themes

1. Timing for go-live

- Although the majority could meet April 2022 many cited dependencies (including a high dependency on back office system vendors), some indicated a Q4 2022 go-live would be more appropriate, others indicated a Q4 go-live would compete with non-ASX industry system upgrades and AGM season, and a few said a binary yes/no was not feasible with the information provided
- More time was required for software providers to develop to mFund

2. Impact of a delay beyond April 2022

- Some explained it would provide more time to absorb COVID related impacts and provide more time for readiness activities
- Avoid Q4 2022 as a go-live due to other industry-wide activities
- September through to November overlaps with peak AGM and dividend season



Consultation feedback

High level summary of key themes cont.

3. Features in scope for Release 1.1 (post day 1)

- A number of CHESS users and an industry association advocated for the features in Release 1.1 should be included as soon as practical however some noted they were not keen to accommodate so soon after go-live
- Non-batch DVP bilateral settlement and electronic DRP/BSP elections and enquiry now included in Day 1
- Electronic acceptance and payment for entitlement offers will be included in a future release

4. Additional types of testing as part of CHESS user readiness activities

- Industry-wide end to end testing
- Industry-wide performance testing
- Functional testing on migrated data

5. Migration dress rehearsals

 Consideration for additional migration dress rehearsals (MDRs) between MDR1 and MDR2, in addition to the three mandatory MDRs



Corporate actions features

Optional or mandatory support

Product	Feature	CHESS User	Optional/Mandatory	Rules
DRP/BSP elections	Submit DRP/BSP election, cancellation, enquiry	Participant	Optional for participants to use	No rules-based obligations to use ASXSOR 5.19A
	Acknowledge receipt of election and/or cancellation, notify issuer instituted cancellation, respond to enquiry	Issuer	Mandatory for issuers to support	Rules-based obligations to support ASXSOR 5.19A
Non-batch DvP bilateral settlement	Instruction creation, modification and cancellation	Participant	Optional for participants to use	No rules-based obligations to use ASXSOR 9.5A, Section 11
	Payment facilities and payments via RITS-RTGS	Payment provider	Optional for payment providers to support, noting demand from payment providers' customers to support this (commercial driver)	No rules-based obligations to support Payment providers that choose to support RTGS become bound by ASXSOR Section 11



Consultation feedback

High level summary of key themes cont.

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Consultation feedback

High level summary of key themes cont.

6. Rules consultation

The majority who provided feedback on the proposed rule amendment indicated they could meet the
proposed timetable; some requested an additional round of consultation on the final rules package (as revised
following the consultation on the tranche 3 rules and consolidated rules package) prior to formal lodgement
with ASIC for regulatory clearance

7. Other feedback

- Need for ASX to meet its delivery dates for published milestones, including CDE and ITE
- ASX support levels and customer experience need to be enhanced to accommodate CHESS users' timely development, testing and migration dress rehearsals
- The timeline needs to make adequate provision for bug fixes and defect resolution
- No changes to functions already delivered in CDE
- Some respondents commented on COVID and the impact to their business and uncertainty it presents to their readiness activities



Other considerations outside the consultation process



Consideration of the extreme volume increases.

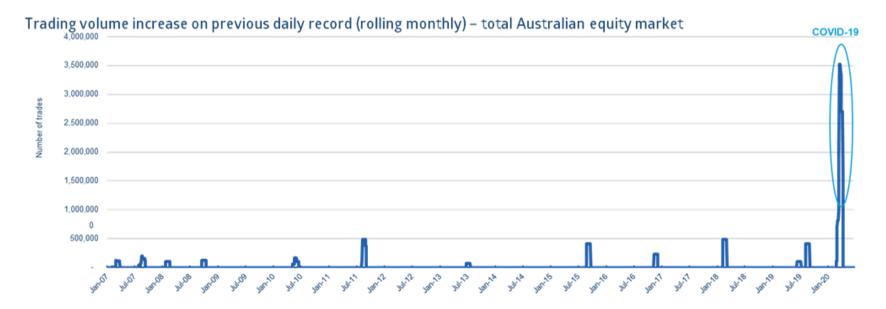
Significant additional capacity and scalability demanded from the industry

- > ASX, the industry and regulators have reflected upon the implications of the extreme volume increases witnessed in March. There are now not only requests for significant additional system capacity on Day 1, but also the ability to quickly accommodate further substantial 'step change' volume increases in the future:
 - The new record means that the replacement system specification should be enhanced for significant additional capacity on Day 1
 - More recently, the severity of the increase has also caused the industry to form the view that "possible future increases" should now mean that <u>post-trade processing capacity should not constrain front office trading activity</u> such that the replacement system is able to scale post-Day 1 to much higher levels than previously envisaged, and to be able to do so quickly.



Consideration of the extreme volume increases

August 2019 trade record of 3.3m more than doubled to 7.0m on 13 March 20



> This has reset expectations on the potential quantum of capacity uplifts. Prior to COVID-19, a 'burst' in trading saw an increase in record daily volume of a few hundred thousand transactions. In March 2020, the burst in trading volume was at 3.5 million - seven times the size of any previous uplift



Other considerations outside the consultation process

Scalability & capacity

- > In order to achieve additional capacity uplifts more quickly post-Day 1, the calculation and dissemination of net broker obligations (NBO) will need to be redesigned in order to complete the necessary overnight processes in a timely manner at high trading volumes
- > Currently, this function of the business process compresses very large amounts of message dissemination (i.e. three times the day's trading volume) into the overnight process. The NBO offsets eligible novated gross trades, and replaces them with a Net Broker Obligation (NBO) by clearing participant, financial product (including basis of movement) and settlement date from the initial trade
 - Done primarily as a messaging efficiency mechanisms, as it collapses daily ~3M trades into ~50K NBOs. These NBOs are scheduled into the daily settlement batch instead of the gross instructions
 - Moves the processing and messaging traffic (linear, high-intensity processes) from intraday (Batch Settlement) to overnight (Trade Day EOD)
- > ASX will consult with all impacted CHESS users (software providers and clearing and settlement participants) from late January 2021
- > Documentation on the changes, including the functional specifications and messaging requirements, will be published after consultation and design finalisation

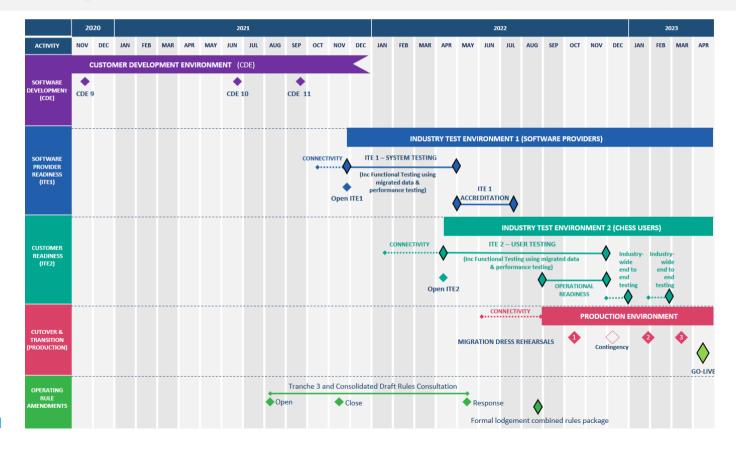


Confirmed implementation timetable



Confirmed Implementation Timetable

April 2023 go live





ASX response

Increasing functionality, capacity, scalability, testing and reducing delivery risk

- > ASX has identified the following key changes to the scope and revised timetable:
 - Redesign the current NBO process to significantly improve the scalability of overnight processing
 - Deliver significantly more intra-day throughput capacity on Day 1
 - Add digitisation functionality in the Day 1 scope corporate action dividend reinvestment plan (DRP)/ bonus share plan (BSP) elections and DRP/BSP enquiry, plus non-batch DvP bilateral settlement functionality
 - Provide additional CHESS user testing greater coordinated testing and market-wide performance and migrated data testing to reduce risks in cutting over to the new system
 - Provide more time for development, testing and readiness activities to reduce delivery risk
 - Extend the period of operation and enhancing the CDE to improve the software provider experience
 - Provide more time before opening ITE with a fully functional system with significantly higher throughput capacity, to reduce delivery risk and improve the customer experience
 - Avoid the SWIFT annual standards release in November each year, key milestones for the ISO 20022 cross-border payments, RTGS migrations, and the AGM season.



Consideration of implementation approach

Further reducing delivery risk

- > The previous plan was to provide CHESS users with early access to the Industry Test Environment (ITE) with code drops then being progressively introduced
- > Opening ITE earlier no longer provides value, adds delivery risk for ASX, and impacts the customer experience given the requests for additional capacity, scalability and functionality will take time to deliver
- > ITE will therefore be opened later when the system is functionally complete with much higher processing capacity to support industry testing
- > To enable continued development pre-ITE, an enhanced Customer Development Environment (CDE) will be provided
- > These changes will provide a better customer experience throughout the implementation process, reduces delivery risk and provides a significantly enhanced CHESS replacement solution on Day 1



Additional information required by CHESS users



Additional information required

What you told us and ASX's response

Many CHESS users highlighted their readiness to support certain project milestones was dependent on ASX making further information available including:

	Feedback	ASX response
Pricing	Further clarity required including a timetable	The response to consultation provides a roadmap for providing details on clearing, settlement, other services, access and CHESS e-statements
Data governance	Provision of a framework on the data governance arrangements	ASX will publicly release an information paper on the data governance arrangements applicable to CHESS in November 2020
Data migration tools	Further technical details for the ASX conversion tool for registration details, including the timing	ASX has already responded to requests by users for more information on conversion tools by holding an Implementation and Transition Working Group webinar on 26 August 2020



Additional information required

What you told us and ASX's response

Many CHESS users highlighted their readiness to support certain project milestones was dependent on ASX making further information available including:

	Feedback	ASX response	
Migration dress rehearsals (MDRs)	Further detail on the plan and approach, and consideration of facilitating optional MDRs in addition to the three planned mandatory MDRs	ASX is planning to release a paper to the market by the end of Q2 2022 setting out the plan and details	
Single cutover weekend	Further information regarding the approach to the single cutover weekend, including measures to derisk the cutover	ASX will publish a separate information paper by Q4 2021 to explain ASX's risk assessment supporting a single cutover weekend migration	
Connectivity details	Timely provision of connectivity details for ITE1 and ITE2 prior to the commencement of testing	ASX is planning to provide the connectivity details required for users three months in advance of the respective opening for ITE1, ITE2, and the "to be" production environment	



Ongoing independent project assurance



Ongoing independent project assurance

Key areas

- > The CHESS replacement project is accompanied by a formal assurance program to ensure the CHESS replacement project meets its key objectives
- > Distinct reviews are performed by either external independent assurance providers, specialist consultants, or internal ASX resources that are independent of the CHESS replacement project. These include:
 - <u>Project governance</u> performing regular project health checks at key milestone dates. Review areas include project progress against milestone dates, scope management, risk management and reporting processes
 - <u>Performance including scalability, stability and persistence</u> assessing volumetrics including throughput capacity and latency with processing high volumes
 - <u>Design effectiveness of controls within the CHESS replacement operating environment</u> reviewing technology and business process controls
 - <u>Data migration strategy, plan and execution</u> providing assurance over the completeness and accuracy of data being migrated to the new system
 - <u>Security</u> reviewing key security controls at the application and infrastructure level.
- > Review results are provided to ASX management, the ASX Board, ASX Clear and ASX Settlement (CS) Boards and the regulatory agencies. Progress of any action items are provided to the ASX Audit and Risk Committee, ASX Board, CS Boards and the regulatory agencies.



Summary



Summary

Working collaboratively with the industry – thank you for your support

- > ASX thanks all stakeholders that provided input and feedback, and looks forward to working collaboratively with the industry to complete the replacement of CHESS including the redesign of the NBO process
- > In setting this revised date, ASX acknowledges the impact that this has on those CHESS users who were on track to meet the proposed April 2022 go-live
- > Notwithstanding, in consideration of the consultation feedback, the importance of managing delivery risk, as well as the ramifications of the extreme volume increases in March this year, ASX has determined that an April 2023 golive ensures CHESS replacement is delivered in a safe and timely manner
- > In the meantime, ASX maintains a robust maintenance program with the current CHESS system, addressing hardware, processing efficiencies and performance tuning. ASX is confident that the current CHESS system can continue to support the industry to the extended timeframe
- > ASX also acknowledges and appreciates the close supervision and engagement of ASIC, RBA, Treasury and the ACCC throughout the project which will continue including an ongoing independent assurance program



Q&A



Next steps



Next steps

Immediate steps following today's session

Review and feedback:

- > Webinar recording, slides and Q&A will be published on the CHESS Replacement webpage
- > Provide feedback by contacting CHESSReplacement@asx.com.au use "I&T webinar" as the subject heading
- > Feedback welcome by COB Friday, 20 November 2020

Next Implementation & Transition Working Group meeting:

> Date: mid December 2020



Thank you.





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