



CHES Replacement Project

**Implementation & transition
working group webinar**

3 August 2022

Housekeeping: trouble shooting

- Check your system requirements
- Audio options:
 1. Use your computer's mic and speakers ("Computer audio"). Check that your computer's audio is unmuted
 2. Use a telephone to dial in ("Phone call")
 - Phone number: **+61 2 8355 1054**
 - Access code: **296-846-260**
 - No need to enter an Audio PIN as audience is muted
 - If you are still experiencing audio difficulties, try downloading the GoTo Webinar Application on your smart phone, and enter the Webinar ID: **649-057-091**

Further information:

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

GoToWebinar Attendee System Check for Webcast Webinars

Looks good! You can join a webinar.

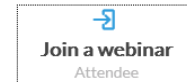


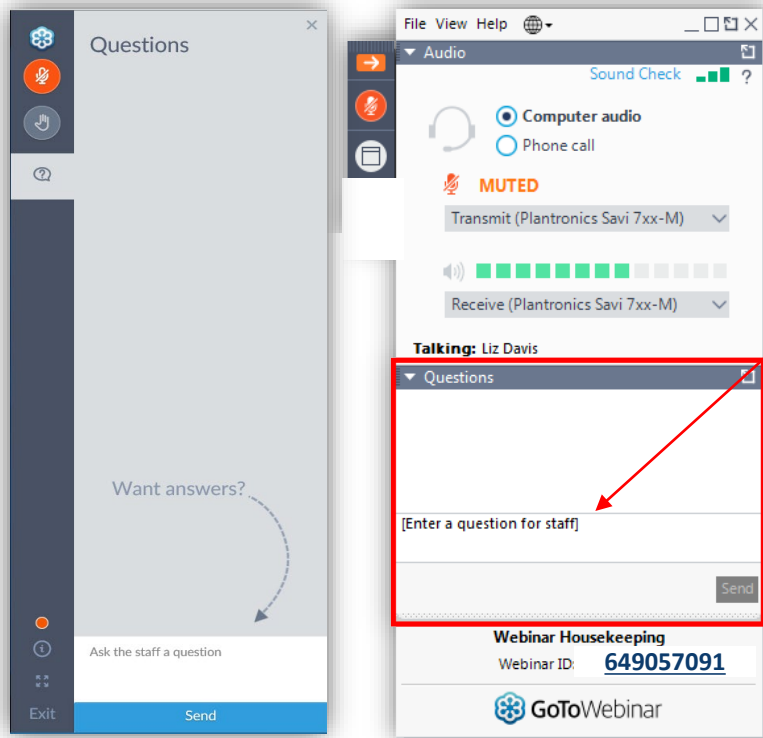
- ✔ OS - Windows 8.1
- ✔ Browser - IE 11
- ✔ Internet connection - Strong
- ✔ Flash - Enabled

Test your system again

View System Requirements

Next steps





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 [CHES Replacement web page](#)

Agenda

-
- Delay to project schedule and an independent review on the software
-
- ITE1 updates
 - Software providers readiness testing to date
 - Version 1.3 and initial accreditation
-
- Information paper on the assessment of implementation options for cutover
-
- Tranche 3 and combined rule amendments
-
- EY's second report on the assessment of ASX's assurance program
-
- Q&A
-

Presenters and introductions

- Keith Purdie

- Tim Hogben

- David Brine

- Fraser Moodie

- Michelle Dal Pozzo

Project Schedule

Project schedule

Replan and independent review of software

- ASX and Digital Asset (DA) has identified that more development is required than previously anticipated to meet ASX's scalability and resiliency requirements. This has contributed to delays to the delivery of the remaining technical components of the software
- ASX, with the co-operation of DA, will engage Accenture to provide an independent review of the new CHES application software and delivery path to completion
- A new go-live date is not expected to be before late 2024
- ITE2 for CHES user testing has been put on hold and will not open before end of 2022:
 - CHES user readiness activities in ITE2 will start no later than 12 months prior to a new go-live date
- Software providers are to spend the rest of this year completing their development and testing to version 1.3, including any regression testing, and to commence with initial messaging accreditation activities
- CHES users can chose to continue completing their network connectivity and the set-up of security certificates for ITE2, otherwise no CHES user activities are required to be performed before end of this year

ITE1 updates

- Software provider testing summary
- v1.3 code release

Software Provider Readiness

ITE1 testing summary (as at v1.2)

ITE1 headlines:

- All market roles are being tested in ITE1
- Broad testing across available features
- Project monitoring of testing a useful indicator ahead of accreditation

Functional / feature testing:

- Project is monitoring the testing activity in ITE1 associated with dedicated test kits.
- We are seeing broad testing of all features available with the previous (v1.2) code base in ITE1.
- Able to compare across cohort peer groups to support testing progress.
- Insights help inform bilateral meetings for those testing in ITE1.

To be followed by:

- Initial messaging accreditation will commence following regression testing by organisations on the new v1.3 code base in ITE1.
- The later, full accreditation will provide the certification of software

Software Provider Readiness – features evidenced during testing

Each market role has specific features appropriate for their role

- Each organisation has features it is permitted to execute as part of its market role.
- ASX uses these to develop a tracking scorecard for ITE1.
- Regular analysis compares each software provider and their peer group for testing coverage.

Organisational / market role	Clearing & Settlement Participant	Sett. Participant	Sponsoring Account	Specialist SP (Offeror)	Share Registry	PISP	Payment Provider	AMO
Key features / messages required by role	76	71	45	15	25	8	7	6
<i>Functionality Categories</i>	<i>Functionality available in ITE1</i>							
Account Management (ISO - acct)	8	8	8	3	3	3	1	
Holding Transfers (ISO - hold)	22	22	22	3	9			
Collateral Management (ISO - pldg)	3							
Settlement (ISO - sett)	27	25					6	
Corporate Actions (ISO - evnt)	5	5	5	4	5			
Reporting & Notifications (ISO - rptg)	7	7	6	3	5			
mFund (ISO - mfnf)						5		
Administration (ISO - admn)	1	1	1		2			
Communication & Notifications (ISO - comm)	3	3	3	2	1			
Market Trade (FIX – AMOs)								4
Pricing Data (FIX – AMOs)								2

Software Provider Readiness – ITE1 functionality testing

Testing activity in ITE1 has covered all available functionality for the current release

- Functionality available in ITE1 is being tested by each cohort actively testing across specific breadth of each role
 - Functionality 100%* evidenced across software providers based on features available (* not 100% feature complete with v1.2 of the application)
- Final features will be available with future code releases to complete the functionality build, for example:
 - Change of controlling participant, Class mergers, cancelled funds obligation, mFund redemption order cancellation
 - Other defect fixes and change requests

Cumulative totals across ITE1 testing period (as at end July 2022)

CHESS ITE1 functionality scorecard	Key features	Evidenced in ITE1	%
Account Management (acct)	8	8	100.0%
Holding Transfers (hold)	24	23	95.8%
Collateral Management (pldg)	8	8	100.0%
Settlement (sett)	31	30	96.8%
Corporate Actions (evnt)	5	5	100.0%
Reporting & Notifications (rptg)	7	7	100.0%
mFund (mfnd)	8	7	87.5%
Administration (admn)	2	2	100.0%
Communication & Notifications (comm)	3	3	100.0%
Market Trade (AMO)	4	4	100.0%
Pricing Data (AMO)	2	2	100.0%

ITE1 Updates – Functionality

Code Drop v1.3

Key Points

Version 1.3 was made available in the Industry Test Environment 1 (ITE1) on Monday 1 August 2022

- ITE1 (v1.3) is the release candidate for initial message accreditation
- Re-instates Change of Controlling Participant and Class mergers
- VMware Ledger upgrade – including Ledger API error code changes
- Multiple bug fixes and resolved defects - updated in the [Known Issues List](#)
- Updates to the test kits for ITE1
- Enhancements to the CHES UI
- Additional Assisted Testing scenarios available
- Changes to self-service tools
- One schema change
- AMO password change functionality
- Performance enhancements

Accreditation

Overview

Phased Accreditation

- ASX is now implementing a two stage accreditation process - Software Providers are to undertake an initial messaging accreditation process on v1.3 of the application, and final accreditation to be performed on the go live production candidate closer to the implementation date
- This change allows for an earlier readiness checkpoint on Software Providers. Final accreditation allows time to address any additional delivery and defects and provides the maximum protection for ensuring the stability and confidence for the clearing and settlement facility
- Focus of this accreditation phase is on functional messaging only (connectivity accreditation is not part of initial accreditation)
- Initial accreditation phase will commence subject to final internal testing including with pilot clients during September
- Customers will be advised once the revised initial accreditation forms are available (targeted end of August)

Accreditation Results:

- ASX is not setting a pass/fail criteria - ASX will not be failing software at this milestone
- Each organisation will be required to attempt one accreditation per software application
- Results will be provided directly to the participating organisation only, it will not be shared with the customers of third party vendors (however vendors may wish to do so)
- ASX may choose to publish metrics on an anonymised basis

Assessment of Implementation Options for Cutover – Information Paper

Assessment of Implementation Options for Cutover

Background

- On 20 July 2022 ASX published an [information paper](#) on ASX's assessment of the implementation options for the cutover to the CHES replacement system.
- ASX acknowledges the interest from stakeholders to understand the rationale for a single cutover, including gaining a better understanding of the complexities and risks associated with the alternative options.
- As part of CHES replacement, CHES will move from proprietary format message (EIS) to global message sets:
 - ISO 20022 messaging – leading global standard for new or modernised financial market settlement infrastructures
 - Standardised FIX based connectivity and message format for the Trade Acceptance Service (TAS) will be used by all Approved Market Operators (AMOs)
- The move to ISO 20022 messaging has implications for the implementation approach and the paper sets out the two main ways this could be achieved - 'like-for-like' or 'enhanced'
- ASX and the market agreed to an 'enhanced' implementation approach for ISO 20022.

Assessment of Implementation Options for Cutover

Four implementation options are examined

1. ASX and CHESS user single cutover to CHESS replacement, and to ISO 20022 with new and enhanced processes
2. ASX single cutover to CHESS replacement and phased CHESS user migration to ISO 20022 like-for-like, followed by single cutover for new and enhanced processes
3. Phased ASX migration to CHESS replacement and CHESS user migration to ISO 20022 like-for-like aligned with ASX phasing, followed by single cutover for new and enhanced processes. Potential variations include:
 - Phasing of which issuers/securities go-live on the new system over points in time
 - Phasing of which holder identification numbers (HINs) go-live on the new system over points in time
 - Phasing of which message types/business processes go-live on the new system over points in time
4. Phased CHESS user migration to ISO 20022 like-for-like with current CHESS, followed by ASX single cutover to CHESS replacement, followed by single cutover for new and enhanced processes

Assessment of Implementation Options for Cutover

Evaluation criteria used to assess the options

ASX used the following valuation criteria to assess the four implementation options as follows:

- **Operational risk** – number of releases into production, cutover point clarity, key process validation, public holidays and non-business days, CHES user readiness, data synchronisation errors, ASX operation of two systems in production concurrently, and CHES user operation of two systems in production concurrently
- **Technical complexity** – release to prepare current CHES, message backwards compatibility considerations, whether concurrent support for EIS and ISO messaging is required, data synchronisation considerations, interim system functionality during cutover, and data migration considerations
- **Market impact** – considerations for specific CHES user cohorts (payment providers, AMOs, clearing and settlement participants including PISPs (product issuer settlement participants), share registries, and RBA), operation of two systems in production concurrently, settlement efficiency, connectivity channel, and number of phases and result project duration
- **ASX impact** – build required, operation of two systems in production concurrently, and number of phases and resultant project duration

Assessment of Implementation Options for Cutover

Validation on the feasibility of each option – sample only

Description	Points for consideration	Option 1	Option 2	Option 3	Option 4
Settlement efficiency	Does the cutover approach result in two settlement batches (one for current CHES, and one of CHES replacement)?	No	No	Potentially, but can be avoided With the 'by issuer/security' variation, one potential option is to run separate settlement batches in each system. This would have implications for ASX, RBA, payment providers and settlement participants. However, this can be avoided by synchronising obligations to the system that is running batch (refer to data synchronisation in the technical complexity assessment)	No
Connectivity channel	Is the cutover approach agnostic to CHES users' choice of connectivity channel (Ledger API, AMQP, SWIFT or CHES UI)?	Yes	Yes	Yes	No - Ledger API users would need to implement ISO 20022 XML as an interim step during the phase 1a transition window, or cutover with Ledger API at the start of Phase 1b (this also impacts CHES UI as it is a native Ledger API application - refer to ASX Impact - build required section)
Number of phases and resultant project duration	Does the cutover approach require multiple phases?	No - 1 phase	CHES users need to manage 3 releases	CHES users need to manage 3 releases and align to the ASX phasing tranches in Phase 1	CHES users need to manage 3 releases

Assessment of Implementation Options for Cutover

Risk mitigation

The paper also sets out how ASX will risk mitigate the single cutover:

Operation risk

- Documentation
- Dress rehearsals (internal and external)
- Rollback as part of dress rehearsal (note – no fallback after Go/No Go point)
- Early stakeholder engagement

Market Impact

- Tools provided to manage data exceptions
- Data remediation
- Inflight migration testing
- Dress rehearsals
- AMO trade registration and pricing parallel test
- Post dress rehearsal Day 1 testing on migrated data
- CHES user testing and accreditation
- Mandatory industry wide test

Technical complexity

- Least complex option **chosen**
- Historical data migrated in advance
- Mock migrations (internal)
- Dress rehearsal testing connectivity
- Migration dry run prior to cutover (ASX internal)

ASX Impact

- Historical data migrated in advance
- Migration dry run prior to cutover (ASX internal)
- Testing on migrated data
- Mock migrations (internal)
- Dress rehearsals
- Post dress rehearsal Day 1 testing on migrated data
- Internal ASX parallel test

Assessment of Implementation Options for Cutover

Next Steps

- A deep dive on the information paper will be a topic for a future webinar
- In the meantime, please send any queries or feedback to CHESReplacement@asx.com.au

Tranche 3 and Combined Rule Amendments

Operating Rule Amendments

Tranche 3 and combined rules

- ASX's [response](#) to consultation on tranche three and the consolidated rules was published on 30 June 2022
- The amendments in tranche three included netting, settlement, reporting, miscellaneous amendments, and the transitional rules addressing the migration cutover
- ASX received eight submissions from a range of stakeholders in addition to the 23 submissions from tranches one and two
- The rules will go through the regulatory process, and ASX aims to publish the final set of rules at least six months prior to the go-live date

CHES Replacement Assurance Program

Assurance Program Report

Second independent expert report

- ASX published the [second independent expert](#) report on the assessment of ASX's Assurance Program for the Chess Replacement Program on 13 July
- These semi annual reviews, are part of the licence condition reviews performed by EY, as the appointed independent expert
- The review assessed:
 - the status of remedial actions from EY's first review in February (Design Assessment of the Assurance Program)
 - progress of completed assurance activities, and
 - provided an update on the trade outage independent expert review recommendations relevant to the CHES Replacement Program.

Assurance Program Report

Second independent expert report

- The review concluded :
 - the Assurance Program continues to be fit for purpose having regard to the breadth, depth and sequencing of assurance activities
 - all three recommendations from the first review have been fully addressed
 - two new forward looking findings were made, aimed at further strengthening the Assurance Program and improving precision in the definition and reporting of Go No-Go criteria
 - with respect to the EY independent review of the IBM (trade outage) recommendations, the report noted a number of actions had been closed, while the remaining actions were continuing to be tracked by the assurance program and not yet due for completion
- The next report due in six months, around December 2022, will assess:
 - the status of remedial actions from this second review
 - assurance activities and outcomes over this next six month period
 - the scope of assurance activities over the re-plan, supporting activity and outcomes
 - implications of the re-plan for the assurance program

Q&A

Next steps

Key points from today's webinar:

- A new go-live date is not expected to be before late 2024
- Accenture have been engaged to provide an independent review of the new CHES application software that is expected to take 12 weeks
- ITE2 for CHES user testing has been put on hold and will not open before end of 2022 and after (i) software providers have completed initial accreditation on version 1.3; and (ii) a new timeline for customer readiness activities has been announced
- Software providers are to spend the rest of this year completing their development and testing to version 1.3, including any regression testing, and to commence with initial messaging accreditation activities
- Version 1.3 of the application software was made available in ITE1 on 1 August and is the candidate for initial message accreditation
- ASX has published (i) our response to consultation on tranche three and the consolidated rules and (ii) the second independent expert report on the assessment of ASX's Assurance Program for the Chess Replacement Program
- A deep dive on ASX's assessment of the implementation options for the cutover to the CHES replacement system information paper will be a topic for a future webinar

Next steps

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 Wednesday, 17 August '22

Next I&T Working Group meeting:

- TBC

Thank you.



Disclaimer

This document provides general information only. ASX Limited (ABN 98 008 624 691) and its related bodies corporate (“ASX”) makes no representation or warranty with respect to the accuracy, reliability or completeness of the information. To the extent permitted by law, ASX and its employees, officers and contractors shall not be liable for any loss or damage arising in any way (including by way of negligence) from or in connection with any information provided or omitted or from anyone acting or refraining to act in reliance on this information.

© 2022 ASX Limited ABN 98 008 624 691