

# CHES Replacement Technical Committee Minutes

24 November 2023

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At its November meeting, the CHES Replacement Technical Committee was updated on:

## AGENDA

- Open actions and feedback;
- Solution design;
- Industry impact and benefits;
- Project timeline;
- Industry Engagement & Consultation;
- Delivery partner; and
- Q&A.

## KEY TOPICS DISCUSSED

Key points from the discussion about the CHES Replacement project included:

- i. An update on solution announcement, impacts, benefits and indicative timeline;
- ii. A discussion on industry engagement, consultation approach and next steps; and
- iii. An introduction of solution delivery partners.

## AGREED ACTIONS

There were two new actions raised at the meeting:

1. Provide an industry consultation working group model inclusive of the Advisory Group; and
2. Confirm the impact of the Release 1 timing proposal on TAS.

Minutes from the meeting are attached.

# Agenda

## CHES Replacement Technical Committee

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<b>Date</b>	24 November 2023	<b>Time</b>	9:00 AM-11:00 AM
<b>Location</b>	Virtual (Microsoft Teams)		

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- 1. Welcome, open actions and feedback**
- 2. Solution design**
- 3. Industry impact and benefits**
- 4. Project timeline**
- 5. Industry engagement and consultation**
- 6. Delivery partners**
- 7. Q&A**

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## Action Items

Item number#	Action	Due date	Status	Owner
2023 November (1)	Verify with other markets if there are any future plans to cater for ASN.1 format.	7 Feb 2024	Open	ASX
2023 November (2)	Provide and validate scope priority items to support the effective sequencing of future working groups.	7 Feb 2024	Open	Committee Members & ASX
2023 November (3)	Provide an industry consultation working group model inclusive of the Advisory Group.	7 Feb 2024	Open	ASX
2023 November (4)	Confirm the impact of the Release 1 timing proposal on TAS.	7 Feb 2024	Open	ASX

### CHES Replacement Technical Committee Members

Company	Name	Job Title	Apologies
ASX	Tim Whiteley	Technical Committee Chair and Project Director, CHES Replacement Project	
	Paul Rayson	Business Committee Chair	
<b>Clearing and Settlement Participants</b>			
ABN AMRO CLEARING	Matthew McMahon	Head of Operations	
AUSIEX	Ashish Jha	Director, Solution Delivery Management	
Merrill Lynch Equities (Australia)	Matthew Gwynn	Project Manager Director, Head of Operations	
BELL POTTER SECURITIES	Lee Muco	Chief Operating Officer	
BNP PARIBAS	Wayne Murphy	Project Manager	
CITI	*Lyll Herron	Program Manager	Jordy Knewstubb
CMC	Michael Connaghan	Head of Engineering & Project Delivery, Stockbroking	
COMMSEC	Ryan Jones	Crew Technical Lead	
FINCLEAR SERVICES	Nikki Gleisner	Senior Business Analyst/Client Relationship Manager	Apology
GOLDMAN SACHS	Simon Wyss	COO, Australia/ New Zealand Engineering	
HSBC	Simon Siluk	Senior Product Manager	
J.P. MORGAN	Scott Oakland	Executive Director Product Management	
MACQUARIE GROUP	Paul Bragg	Operations Analyst	
MORGAN STANLEY WEALTH	Andrew Sime	Executive Director	
MORGAN STANLEY SECURITIES	Rebecca Collins	Executive Director	
MORGANS	Daniel Spokes	Director, Client Support Services	
NAB	Rodd Kingham	Head of Investment Service (WealthHub Securities)	
UBS	*Andrew Lockhart	Executive Director, Investment Bank Operations	Scott Hanlon, Head of Operations, Executive Director
<b>Third party software vendors</b>			
BROADRIDGE	Danielle Gerace	Head of Client Service Australia	
COMPUTERSHARE	Leanne Bailey	Senior Business Analyst	
FINCLEAR	*David Bowles	Head of Product for Settlement & Clearing systems	Craig Gray
FNZ	*Sue Schafer	Head of Product Management – Capital Markets	Nick Clarke
SECURITEASE	*Chris Werry	General Manager	David Hinkley
<b>AMOs</b>			
ASX	Jimmy Halstead	Head of Trading Technology Markets,	

		Technology	
CBOE	Mike Aikins	Vice President APAC – Operations and Technology	
NSX	*Chris Thuyet	Head of Market Operations and Technology	Yemi Oluwi
SYDNEY STOCK EXCHANGE	*Archana Sanduga	Head Exchange Technology	Rajnish Tiwari

#### Share Registries

ADVANCED SHARE REGISTRY	Patrick Gan	IT Manager	
AUTOMIC GROUP	Sue Julian	Head of Business Operations	
BOARDROOM	Michael Mullins	Chief Information Officer	
COMPUTERSHARE	Scott Hudson	General Manager – Market Liaison	
LINK MARKET SERVICES	Andrew Farrell	Senior Project Manager – CHES Replacement	

\* Delegate

#### Observers

Company	Name	Job Title	Apologies
AusPayNet	Luke Wilson	Chief Operating Officer	Apology
AFMA	Brett Harper	Chief Executive Officer	Apology
	Damian Jeffree	Senior Director of Policy	
AIRA	Ian Matheson	Chief Executive Officer	
GIA	Simon Pordage	Brand Ambassador for Governance Institute of Australia & Company Secretary for ANZ)	
SIAA	Judith Fox	CEO	
ASIC	Dodie Green	Senior Manager, Market Infrastructure	Apology
	Andia Petropoulos	Senior Analyst, Market Infrastructure	Apology
	Bharat Patel	Senior Specialist, Financial Markets Infrastructure Financial Risk Manager	Apology
RBA	Kylie Stewart	Senior Manager, Domestic and Payments, Financial Market Infrastructure	Apology
	Tatiana Moiseeva	Lead Analyst, Financial Market Infrastructure, Domestic and Payments	Apology
	Elizabeth Kandelas	Manager	Apology
	Rhea Choudhary Joanna Lang	Graduate Lead Analyst, Clearing and Settlement Facilities Supervision, Payments Policy Department	Apology

## EY

<b>Name</b>	<b>Job Title</b>	<b>Apologies</b>
Corinne De Rosa	Director, Financial Services	Apology
Felicity Potter	Partner	Apology
Monica Du	Manager	
Anneke Knol	Senior Manager – Tech Transformation	
Donia Saeidi	Director	

## ASX Management

<b>Name</b>	<b>Job Title</b>	<b>Apologies</b>
Katie McDermott	General Manager, Business Lead, CHES Replacement Project	
Steven Hannan	Stakeholder Engagement Senior Manager, Equity Post Trade	
Triona Quinlan	General Manager, Technology Delivery	
Chris Boyes	Senior Product Manager, Securities and Payments	
Russell Eyre	Enterprise Architect	
Clive Triance	Group Executive, Securities & Payments	

## AGENDA ITEM 1: Welcome and open actions & feedback

The Chair welcomed members and delegates to the eleventh CHESS Replacement Technical Committee (Committee) meeting.

Meeting attendance was recorded and is reflected in the Committee members tables provided with the 24 November minutes.

The Chair noted the 24 November Committee was virtual only and was intended to facilitate discussion, provide further context and answer any questions on the CHESS Replacement solution decision announcement.

The previous 8 November Committee minutes were distributed on 22 November. The Chair welcomed feedback and clarifications to these minutes, noting they would be endorsed alongside the 24 November Committee minutes at the 7 February Committee.

The Chair reminded members of their obligations under competition law and encouraged active participation noting the purpose of the Committee was for stakeholders to provide input and feedback. An overview of the agenda was provided before the Chair introduced the two open actions from the 8 November meeting:

Item Number	Action	Discussion
2023 November (1)	Verify with other markets if there are any future plans to cater for ASN.1 format.	Action to be addressed at the February 7 Committee.
2023 November (2)	Provide and validate scope priority items to support the effective sequencing of future working groups.	Action to be addressed at the February 7 Committee. Indicative scope priority item and proposed working group sequencing has been provided by ASX as part of Agenda item 5. (Industry engagement and consultation)

No member feedback had been recorded since the 8 November Committee. The chair reiterated feedback via email or phone was welcomed, noting a pulse survey would be conducted post Committee.

Prior to the market announcement, the solution was presented to the Cash Equities Clearing and Settlement Advisory Group (Advisory Group). In their advice, the Advisory Group recommended ASX make clear the following:

- The industry impact of the selected solution;
- The benefits to the market of the selected vendor and associated product, and how ASX has assessed its ability to deliver in a reasonable time frame a post trade system that can manage the volume and complexity for the Australian market; and
- Their commitment to building a system that is interoperable and could support competition in clearing and settlement in Australia, including a commitment to consult industry on the arrangements for interoperability and standard interfaces.

The Chair reiterated ASX's intention to cover these topics as part of the Committee's proceedings before introducing the ASX Enterprise Architect to speak to the solution design.

## AGENDA ITEM 2: Solution design

The ASX Enterprise Architect introduced the solution design which leverages a mature vendor product, TCS BaNCS for market infrastructure (MI). TCS BaNCS for MI is a product focused on the industry critical operations of CCPs, CSDs, central payments infrastructures, central banks and other regulatory bodies. It is compliant with global standards such as BIS for settlements and CPMI-IOSCO Principles for Financial Market Infrastructure and continuously benchmarked

against evolving industry standards. ASX will customise TCS BaNCS for MI where necessary to meet Australian market practices.

The TCS BaNCS for MI product will be responsible for all core clearing and settlement transaction processing including batch settlement. The solution will leverage a number of ASX platforms, specifically for hosting integration, ASX's data platform and security infrastructure.

The clearing component of the solution is implemented on top of a micro service-based architecture that supports high performance and horizontal scalability, enabling the system to scale with increasing trade volumes. The TCS BaNCS for MI product supports various messaging formats including ISO20022, FIX and combined with support for proprietary interfaces, provides the necessary STP capabilities to connect to the participants, trading systems, central banks and other internal sub-systems and external systems. It also supports non-standard formats which will be leveraged to interact with existing CHESSE via EIS messaging in Release 1.

External message gateways will be provided by ASX, which retains the flexibility with regard to how the system interfaces with CHESSE users, AMOs and the interoperability use cases. This also supports the reuse of components that were built to interface with users previously.

The TCS BaNCS for MI product also provides a browser-based user interface that will serve a similar purpose to the CHESSE UI built in the previous iteration of the CHESSE Replacement project.

The ASX Enterprise Architect continued noting the solution will integrate into the ASX data platform in near real time. Initially this will be leveraged to facilitate internal and regulatory reporting use cases, but ASX can extend this to provide API access to data over time.

### **Member Discussion**

A member representing a share registry requested clarification on whether the data platform service was related to DataSphere. The ASX Enterprise Architect responded stating that the data platform leveraged some of the capabilities of DataSphere but also included new capabilities and additional governance.

A member representing a participant questioned whether the reference to APIs indicated that the platform was open to other APIs or whether it was limited to ISO 20022. The ASX Enterprise Architect stated that API access was a planned future method of accessing data, noting the current design for Release 1 and 2 prioritised ISO 20022 messaging. The Chair reiterated that the solution at its core would remain a messaging-based solution but would be open to new services and capabilities in the future.

## **AGENDA ITEM 3: Industry impact and benefits**

### **1.1. Industry impact**

The General Manager, Business Lead introduced the industry impacts of the CHESSE Replacement solution design. ASX expects a combination of three key factors will enable it to deliver a post trade system that can manage both the volume and complexity of the market and deliver key industry benefits. These included:

#### **Selection of an established product**

- A global leading product with a strong operational track record across multiple markets around the world;
- Proven scalability to handle 100% headroom on peak Australian market trade volumes; and
- Inherent capability to transition to T+1.

#### **Additional delivery support**

- Solution integrator Accenture has been contracted to provide additional support for the implementation and delivery and provide scalable resources if required.



## Staged implementation

- Plan supports staged implementation, backwards compatibility during the first phase of the project and resource optimisation – subject to consultation;
- Other than AMOs, CHES users and software providers should be largely unaffected by the change required in Release 1 and will continue to interface with CHES; and
- Provides industry the time to slowly increase requisite project delivery resource requirements during the planned market consultation for 2024.

## 1.2. Industry Benefits

The General Manager, Business Lead concluded by providing an overview of industry benefits of the CHES Replacement solution design. These included:

### Improved scalability

- Maintain high operational and resilience standards, while providing improved scalability and the ability to support future market growth as required;
- Key selection criteria was to meet an initial minimum daily trade registration volume of twice projected volume stress levels (currently 15 million trades); and
- Can scale further as market grows.

### Interoperability

- Allows access to individual clearing, settlement and sub-register components of the new system, using standardised interfaces;
- Can support potential for future services to be introduced by ASX and other providers;
- Design enables clear segregation at the business capability level of clearing, settlement, sub-register and non-clearing and settlement functionality; and
- Defines interfaces between clearing, settlement and sub-register, including designs that support third party access channels.

### Re-use of industry investments

- The significant industry effort relating to workflow development and global messaging standards is expected to remain largely relevant for potential reuse;
- Likely to include the ISO 20022 standard, the message schemas, data formats, and workflows previously developed – supported by TCS BaNCS for MI product and by the industry and can be retained in the new system; and
- This remains subject to consultation on scope and detailed design.

### Innovation and growth opportunities

- The solution can provide for connectivity with alternate technologies, including DLT and other emerging technologies;
- Support future innovation by creating opportunities for new services to be introduced by ASX or other providers, as driven by market demand; and
- The architecture supports innovation and opportunities for future market driven services and enhancements.

### Member Discussion

A member representing a participant requested clarification on scope related to T+1 and whether the solution could support T+1. ASX General Manager, Business Lead noted the capability existed and that requirements for the Australian market would be clarified and refined via industry consultation in the coming year. The ASX Group Executive, Securities and Payments continued by outlining the setup of a new business subcommittee to support T+1. These meetings are scheduled in Q1 2024, the result of which is targeting a whitepaper in Q2. Additionally, ASX will

host executives and industry experts who have supported or are currently supporting T+1 from Canada, India and the US at a conference on 5 March 2024 to support further panel discussions pertinent to the challenges with this transition. The ASX Group Executive, Securities and Payments concluded by stating that to make an informed decision with the market, ASX would continue to observe other markets completing this transition, including the US in May-June 2024, to assess the impacts of T+1.

#### **AGENDA ITEM 4: Project timeline**

The ASX General Manager, Technology Delivery provided a high-level overview of the indicative project timeline, noting the timeline is subject to market consultation. Key information included:

##### **Release 1 project timeline**

- Release 1 will encompass clearing functionality.
- Release 1 consultation will be conducted in Q1 2024, with initial working group kick-off sessions planned for the second week of December 2023.
- From an ASX delivery perspective, December will involve scaling up both the TCS and Accenture SI teams as well as collaborating on ways of working.
- AMOs are scheduled to be connected to the industry test environment in late 2024.
  - This will enable AMOs to complete any remaining build activities and test while ASX completes the Release 1 build.
  - Once the Release 1 build is complete, AMOs will proceed to readiness and accreditation.
  - AMO parallel testing is also planned in the to-be production environment.
  - Regression testing is also planned with clearing participants to ensure backwards compatibility and that there is no impact to clearing participants.
- Targeting a Q1 2026 go-live.

##### **Release 2 project timeline**

- Release 2 will encompass settlement and sub-register functionality.
- Release 2 consultation will commence in early 2024, which will cover scope, design and implementation plan, but also T+1 and other macro factors.
- Release 2 includes planned software provider readiness and CHES user readiness phases.
  - A key learning that will be incorporated in the industry testing approach from the previous iteration of CHES Replacement involves the lengthening of the accreditation period to enable the following scenarios:
    - Allowing software providers to provide software to CHES users before accreditation; and
    - Supporting CHES users awaiting accredited software from their software providers.
- Two alternatives, concurrent and sequential, have been proposed, noting the sequential timeline for release 2 decreases the amount of overlapping activities, but extends the proposed go-live date.
  - The selected release 2 plan will be subject to market consultation and ongoing T+1 activities.
  - A decision on the release 2 plan is expected in Q4 2024 after which a new timeline will be published.

##### **Member Discussion**

A member representing an AMO questioned whether the FIX interface work proposed at the 10 November AMO working group is impacted by the solution design. The ASX General Manager Business Lead clarified that the information provided in the prior AMO working group was solution agnostic. The member representing an AMO requested further clarification on whether the TAS Interface would need to continue to support current market volumes to Q1 2026. The Chair noted this would be discussed at future an AMO working group and recorded this as an action.

A member representing a share registry requested clarification whether, as part of release 1, the new system would receive trades and execute netting while current CHES handled the EIS 164 messages and outbound netting messages. The ASX Enterprise Architect clarified the new system would create the CHES messages natively, noting these messages would be sent over the CHES message broker to a user's normal queue. The member representing a share registry further questioned whether a test environment for release 1 would be setup to support software providers. The Chair confirmed ASX is considering a set of regression style tests, noting the approach to this type of testing would be discussed and consulted on in the upcoming working groups.

## AGENDA ITEM 5: Industry engagement and consultation

### 1.3. Evolution of stakeholder engagement

The Chair provided a summary of stakeholder engagement activities since the project pause. Following the 17 November 2022 pause, leading market feedback themes included the need for:

- improved status reporting; and
- greater project visibility and transparency.

Recommendations were proposed to ASX Boards to revisit the engagement approach to ensure greater market transparency and provide the market with the appropriate opportunities for input. Subsequently, as a direct result of industry feedback, the CHES Replacement Technical Committee and supporting scope refinement workshops were setup to explore areas of impact for CHES users and software providers. The Chair reiterated ASX's commitment to ongoing industry engagement in CY24, thanking Committee members for contributing over the past year before introducing the General Manager, Business Lead to walkthrough the planned public consultation approach.

### 1.4. Planned public consultation and working group engagement

The General Manager, Business Lead provided an overview of the planned public consultation timeline and working group engagement model. Formal consultation with stakeholders will commence in the first quarter of 2024 and cover the high-level project plan and an indicative timeline for the releases, including the design, scope, and timing for each of the releases. Noting separately that once the design consultation is progressed, ASX will consult on amendments to its operating rules.

In addition to the Business and ISO Design Working Groups initially proposed in the 8 November Committee, ASX proposed introducing the Implementation and Transition Working Group. The Implementation and Transition Working Group is responsible for implementation planning and will be consulted on the plan, cutover, migration and testing.

#### Next steps

- Committee members are requested to nominate up to two primary representatives to participate in the working groups;
- Meetings will be up to 2 hours in duration and will be held monthly, the first, on Release 1, occurring in the second week of December. Invitations will be sent shortly; and
- Nominated members should have the appropriate skills and business responsibilities to actively contribute and follow up on activities for their own organisation's implementation plans.

#### Industry consultation topics

The ASX General Manager, Business Lead concluded by providing an overview on the topics ASX will consult with the industry on release 1 (clearing) and release 2 (settlement and sub-register), including:

- Business scope items and their business design;
- Demonstration of and consultation on, how the vendor solution fits to deliver the market objectives;
- Market impacts and activities required by market participants and software providers, including for release 1, backward compatibility safeguarding impacts to all market participants other than AMOs;

- Industry test approach, cutover & migration approach and delivery timeline
- How technical enablement aimed for release 1 de-risks release 2 implementation and delivers towards the target solution;
- Opportunities to mitigate risks further through various testing options (e.g. industry parallel testing); and
- Macro industry factors including industry progress on T+1 or other macro industry factors.

#### **Public consultation model and business design topics**

The ASX Senior Product Manager detailed the approach to public consultation, noting inputs from bilaterals, internal discovery, industry requirements as well as working groups would be incorporated in the formal consultation paper. The ASX Senior Product Manager reminded Committee members that the ASX management response to consultation paper feedback would be played back and, to support ongoing industry engagement, workshops would continue post the nominated consultation period.

The ASX Senior Product Manager concluded by providing a proposed list of business design workshop topics, applicable release, scope objectives and users, noting the order presented was indicative, subject to change based on industry inputs, further planning and that multiple sessions may be required per topic.

#### **Forward Plan**

The ASX Senior Manager, Stakeholder Engagement summarised the proposed Committee schedule for CY2024, noting the February and March invites would be sent out shortly after the Committee concluded. Committee members were reminded that prior to the end of the calendar year, ASX would conduct a final pulse survey to baseline and track effectiveness as the project moves forward.

The Chair reiterated ASX's plans to kick-off the working groups supporting the formal consultation process in the second week of December, noting invitations would be sent out shortly after the Committee concluded.

#### **Member Discussion**

A member representing an industry association questioned whether issuing companies were being adequately engaged. The Chair noted T+1 as an example of industry engagement as a topic inclusive of issuing companies. The Chair further added that ASX would continue to work with Committee members and industry associations on other areas to better engage on from an issuer outcome basis.

A member representing a share registry questioned whether EY would expand the scope of their assurance activities to include industry feedback. The Chair responded by acknowledging EY's presence in the Technical Committee since their introduction in March, noting their role is to listen and record industry feedback in relation to their recommendations and findings as part of the overall assurance activity.

### **AGENDA ITEM 6: Delivery partners**

The Chair summarised ASX's solution delivery partners. In particular, the Chair noted:

- TATA Consulting Services (TCS) is the largest exchange neutral, independent software vendor in the market infrastructure space with a headcount of over 5,000 associates and approximately 615,000 globally.
- Accenture is globally recognised as a high-quality systems integrator and for their quality engineering practices with a head count of over 2000 capital markets professionals, onshore, nearshore and offshore.

#### **Member Discussion**

A member representing a share registry questioned whether Accenture and TCS have worked together previously in other markets. The Chair clarified that Accenture and TCS had not previously worked together, noting TCS did not have a SI delivery partner preference. The Chair added that Accenture would support ASX in program management

with a key role and focus on extending test, automation and deployment capabilities and supporting the industry test environments necessary to support CHES users and software providers.

#### AGENDA ITEM 7: Q&A

The Chair opened for questions, noting questions and answers raised throughout the proceedings of the Committee would be formally recorded as part of the minutes.

#### Member Discussion

A member representing an industry association questioned the underlying technology behind the TCS BaNCS for MI. The Chair noted ASX was investigating options to leverage cloud with TCS. The Chair added this would involve a Postgres database as part of the solution, noting the BaNCS for MI product supports a number of technology stacks and ASX is working with TCS on determining the most appropriate setup. The Enterprise Architect added the solution would be java based and the containerised clearing workloads will be run in a Kubernetes microservice infrastructure.

The meeting closed at 10.37 AM

Signed as a correct record of the meeting.

A handwritten signature in black ink, appearing to read 'White', written over a horizontal line.

Chair

7 February 2024

Date