

ASX CHESS Replacement

Technical Committee

24 November 2023



ASX acknowledges the
Traditional Owners of
Country throughout Australia.
We pay our respects to
Elders past and present.

ARTWORK BY: LEE ANNE HALL, MY COUNTRY MY PEOPLE



Housekeeping

Troubleshooting

- > Please mute yourself when not speaking
- > Please use the 'raise hand' feature on MS Teams if you would like to ask a question
- > Please introduce yourself when talking for the benefit of all members
- > Meeting is being recorded for the purposes of minute taking
- > Dial in details (audio only):
 - **+61 2 7208 4607**
 - Phone Conference ID: **760 482 473#**
- > Presentation materials will be distributed after the meeting

Important Information

Competition Law Reminder

- > Committee members are reminded to have regard to their obligations under competition law. In particular, please note that the Competition and Consumer Act prohibits a corporation from engaging with one or more persons in a concerted practice that has the purpose, effect or likely effect of substantially lessening competition.

Agenda

01 – Welcome, open actions & feedback

02 – Solution design

03 – Industry impact & benefits

04 – Project timeline

05 – Industry engagement & consultation

06 – Delivery partners

07 – Q&A

01 – Welcome

Open actions and member feedback

Open Action: 2023 November (1) *(due February 7)*

Verify with other markets if there are any future plans to cater for ASN.1

change in format.

Open Action: 2023 November (2) *(due February 7)*

Provide and validate priority scope items to support the effective sequencing of

future working groups.

02 – Solution design

02 – Advisory group

Recommendation

In their advice, the AG recommended that in announcing their Solution Design, ASX make clear statements with respect to the following:

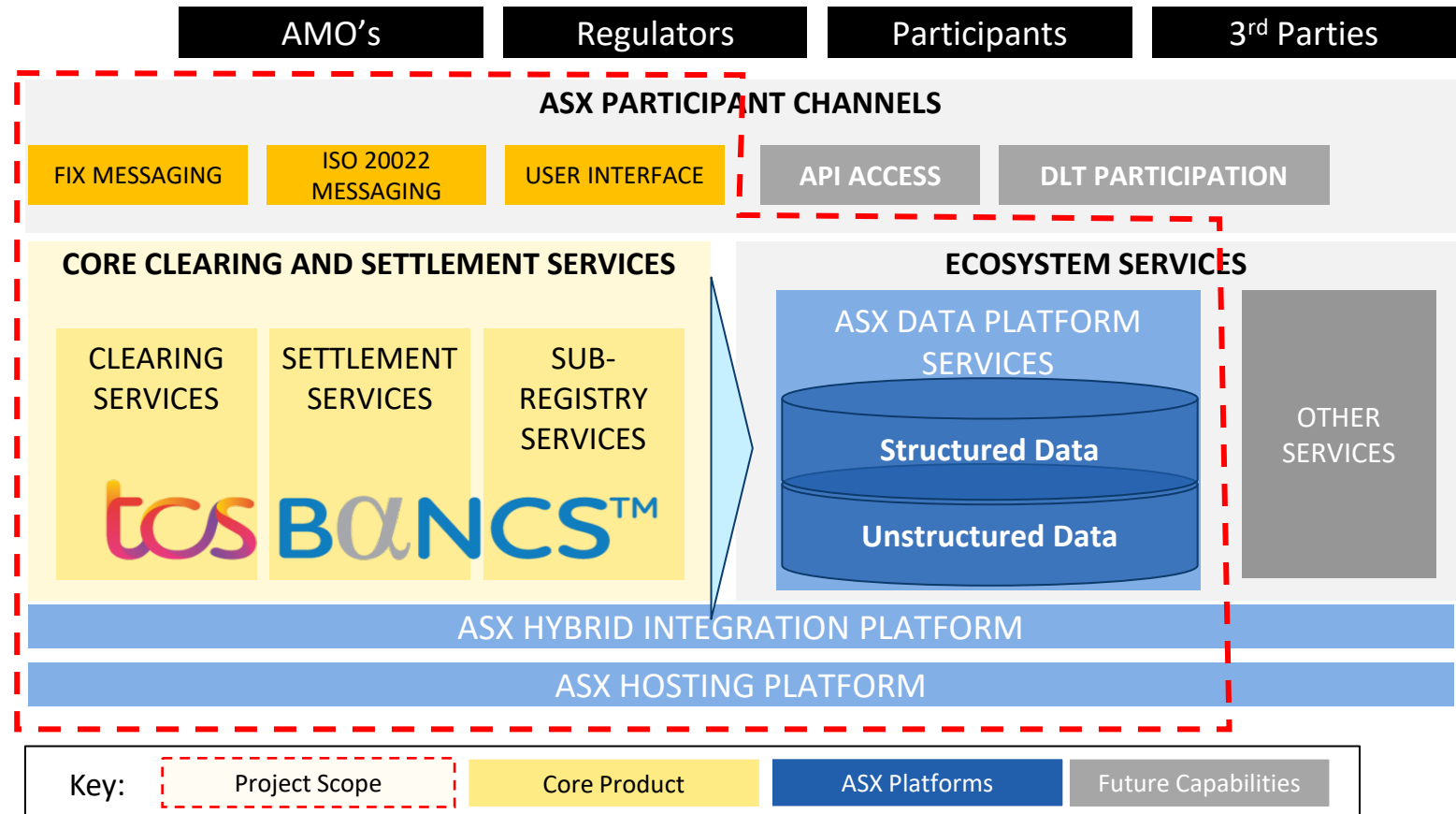
- › The industry impact of the selected solution;
- › The benefits to the market of the selected vendor and associated product, and how ASX has assessed its ability to deliver in a reasonable time frame a post trade system that can manage the volume and complexity for the Australian market; and
- › Their 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.

02 – Technology Solution

TCS BaNCS for Market Infrastructure (TCS BaNCS 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.
- > The product is built on micro services and is componentised for the needs of these types of organisations.
- > Support for messages using ISO20022, FIX, 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.
- > Compliant with global standards such as BIS for settlements and CPMI-IOSCO Principles for Financial Market Infrastructure
- > Continuously benchmarked against evolving industry standards.



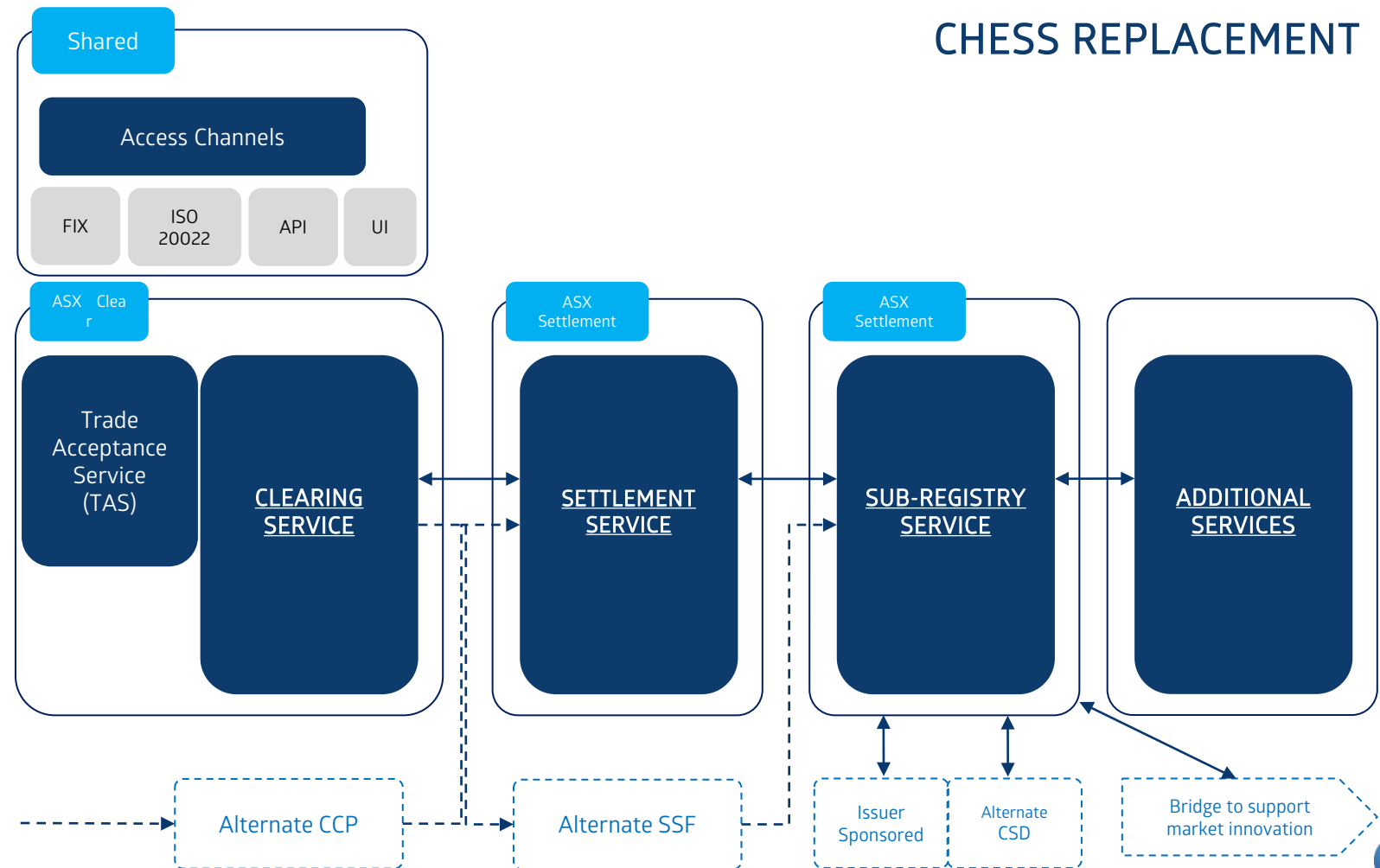
02 – Key Benefits of the Solution Design

Modernising critical market infrastructure

Modern systems are modular in design, providing greater efficiency to deliver enhancements and manage change.

Key Design Benefits

- Interoperable
- Standards Based Interfaces
- Modular Architecture
- Resilient and Proven

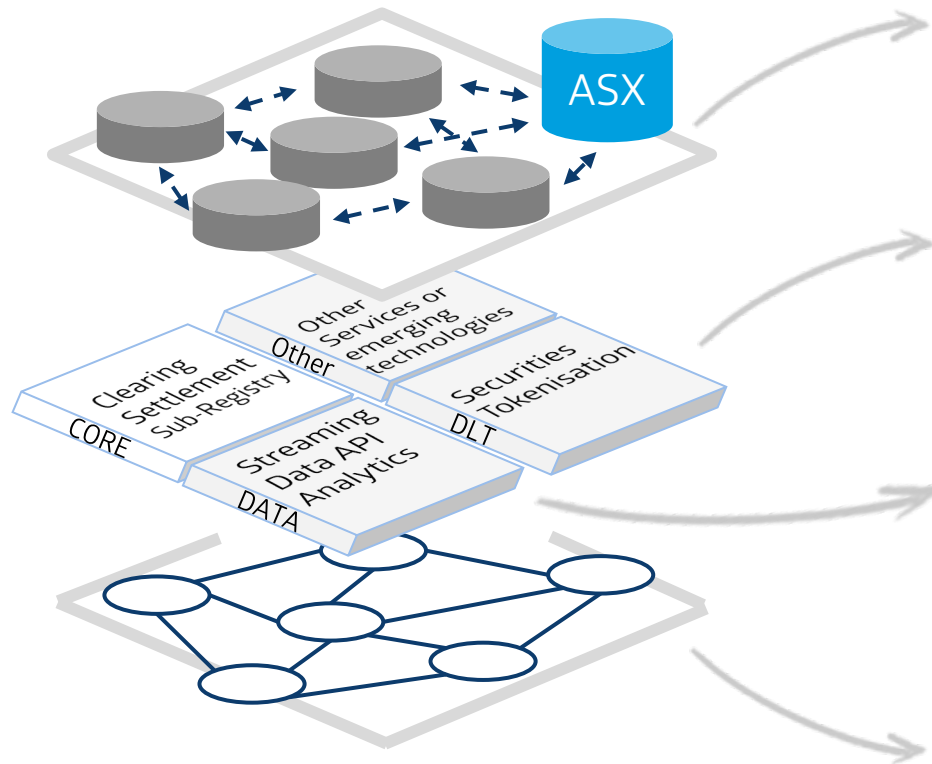


02 – Enabling a modern market infrastructure

Open, modular and scalable architecture to enable future opportunities driven by market demand

Innovation 'Ecosystem'

Enable the industry to build market services on top of ASX's infrastructure



Establish a platform of distinct and accessible business capabilities

Provide services that drive further market efficiencies

Enable DLT extensibility for market use cases

Establish a data-distribution model to consume/instruct activities

Develop an open infrastructure that enables a market ecosystem



03 – Industry impact & benefits

03 – Reducing the impact to industry

Through an established product, strategic delivery partners and staged implementation

ASX expects that 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

Selection of an Established Product

- A global leading product that has a strong operational track record across multiple markets around the world
- Proven scalability to handle 100% headroom on peak Australian market trade volumes
- 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
- Accenture will support ASX's existing project delivery, architecture, testing and capital market expertise
- Also 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 market participants should be largely unaffected by the change required in Release 1 and will continue to interface with CHES
- Provides industry the time to slowly increase requisite project delivery resource requirements during the planned market consultation for 2024

03 – Reducing industry impact through a staged implementation

ASX is proposing a staged implementation of the solution over two main releases

Release 1 – Clearing

- Migrate AMOs to the FIX interface
- Migrate trade registration to the new clearing component of the solution
- Implement the technical infrastructure for the strategic solution
- Provide backwards compatibility to minimise impact on the market

Release 2 – Settlement & Sub-register

- Implementation of the full solution including all remaining clearing functionality
- Implementation of the full settlement and sub register functionality, including enhancements added through consultation
- Take into account T+1 and other macro factors

03 – CHES replacement

Industry Benefits



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)
- > 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
- > 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
- > This remains subject to consultation on scope and detailed design



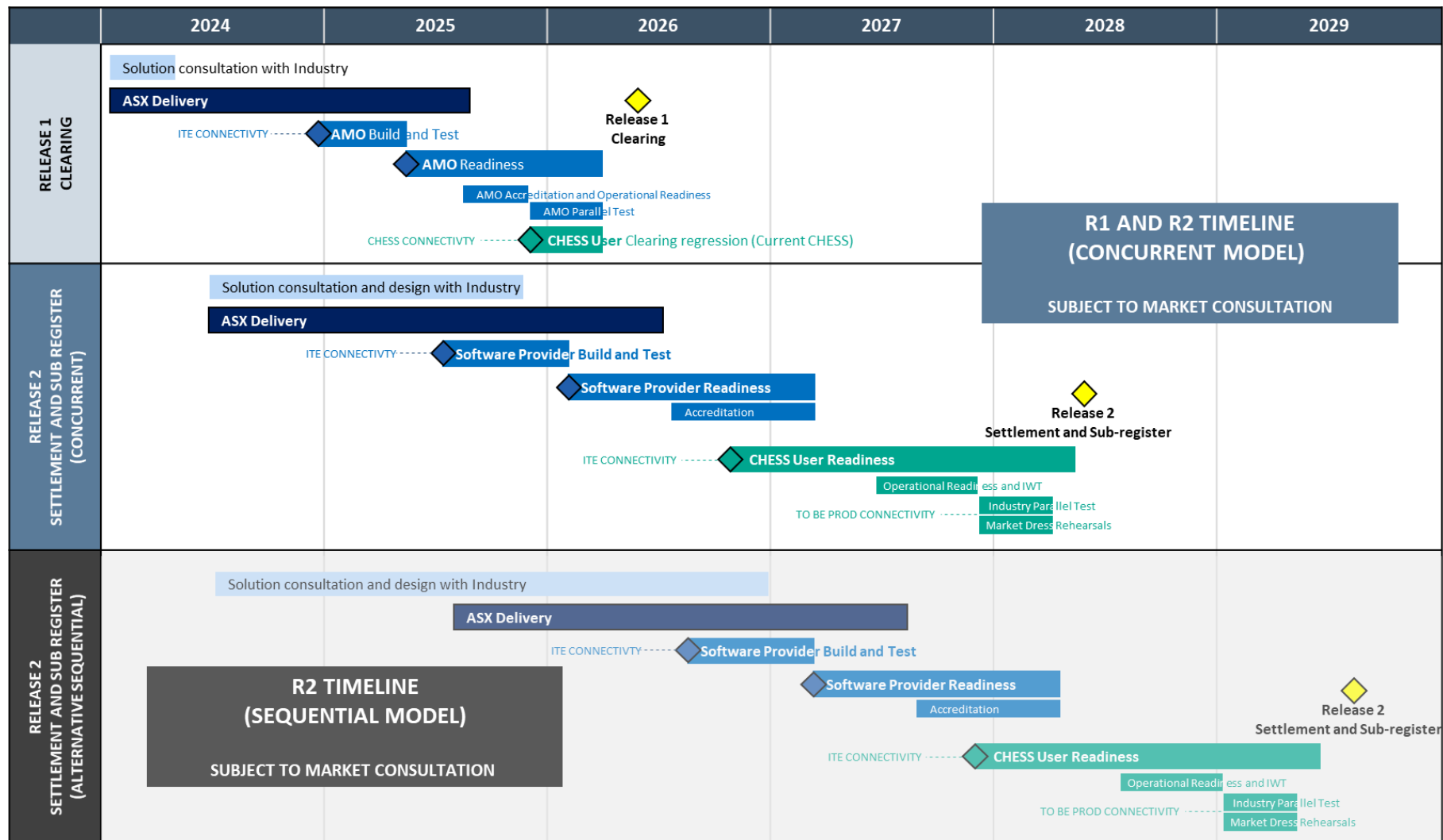
Innovation & Growth opportunities

- > 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
- > The architecture supports innovation and opportunities for future market driven services and enhancements

04 – Project timeline

04 – Indicative Project Timeline

High level overview of the proposed timeline, subject to industry consultation





05 – Industry engagement & consultation

05 - Evolution of stakeholder engagement

Changes in CY2023

The need for change

- › Following the 17 November 2022 announcement, leading market feedback themes included the need for:
 - improved status reporting
 - greater project visibility and transparency
- › Recommendations were proposed to ASX Boards to revisit the engagement approach to provide greater market transparency and provide the market an opportunity to provide appropriate input.

Establishment of the Technical Committee

- › Established in 2023 as a direct result of industry feedback, the CHES Replacement Technical Committee (TC) allows ASX and the industry to explore areas of impact for CHES users and software providers.
- › To date, there have been 3 scope refinement workshops and 11 meetings of the Technical Committee with quarterly pulse survey's conducted to proactively assess the effectiveness of this engagement vehicle.
- › Prior to the CY24, there will be a final pulse survey. The results will be used to baseline and track effectiveness as CHES Replacement moves forward.

Support of Business Committee and the newly established Advisory Group

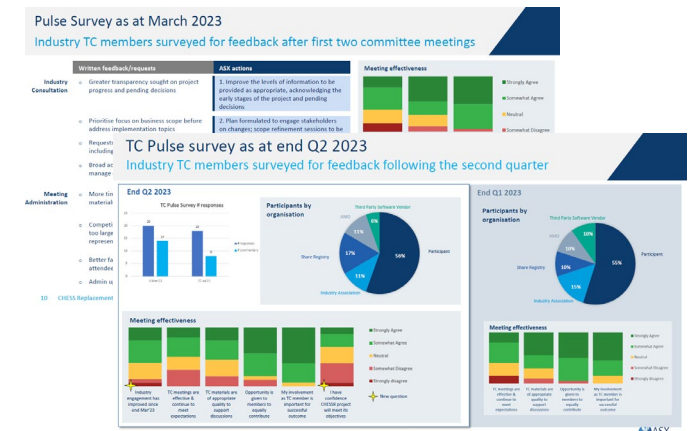
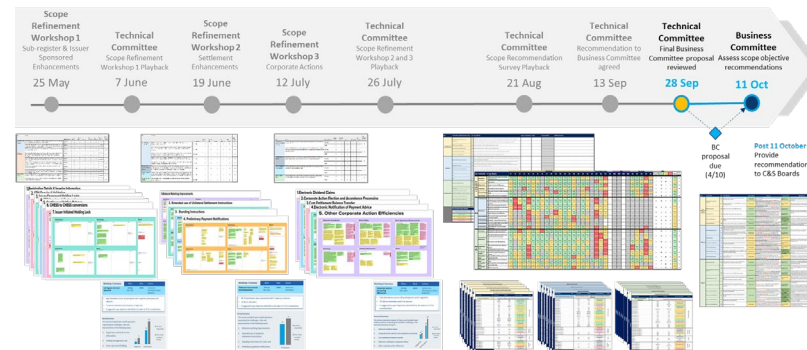
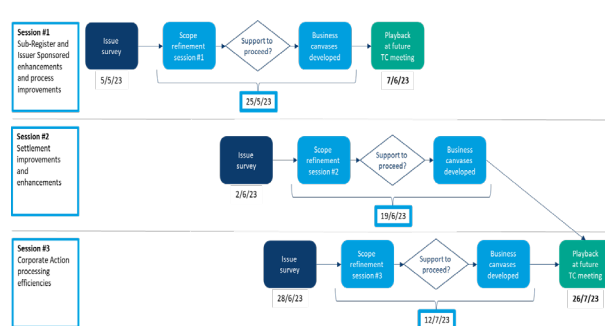
- › Technical Committee reporting is a standing agenda item in Business Committee and a review of Committee proceedings was completed in the July BC.
- › Status, updates and approach to industry engagement on the Solution Decision were communicated to the Advisory Group confidentially.

05 – Stakeholder engagement objectives

Activities in CY2023

The objectives for industry engagement has been to:

- Increasing transparency and stakeholder participation in project activities, decision-making and engagement;
- Improving governance, documentation, and communications;
- Expediting problem solving and issues management;
- Capturing and acting effectively and in a timely manner on feedback;
- Proactively managing change as the project progresses including ad-hoc inclusions; and
- Rationalisation of engagement forums and processes.



05 – Stakeholder engagement forward focus

Key activities and focus for CY2024

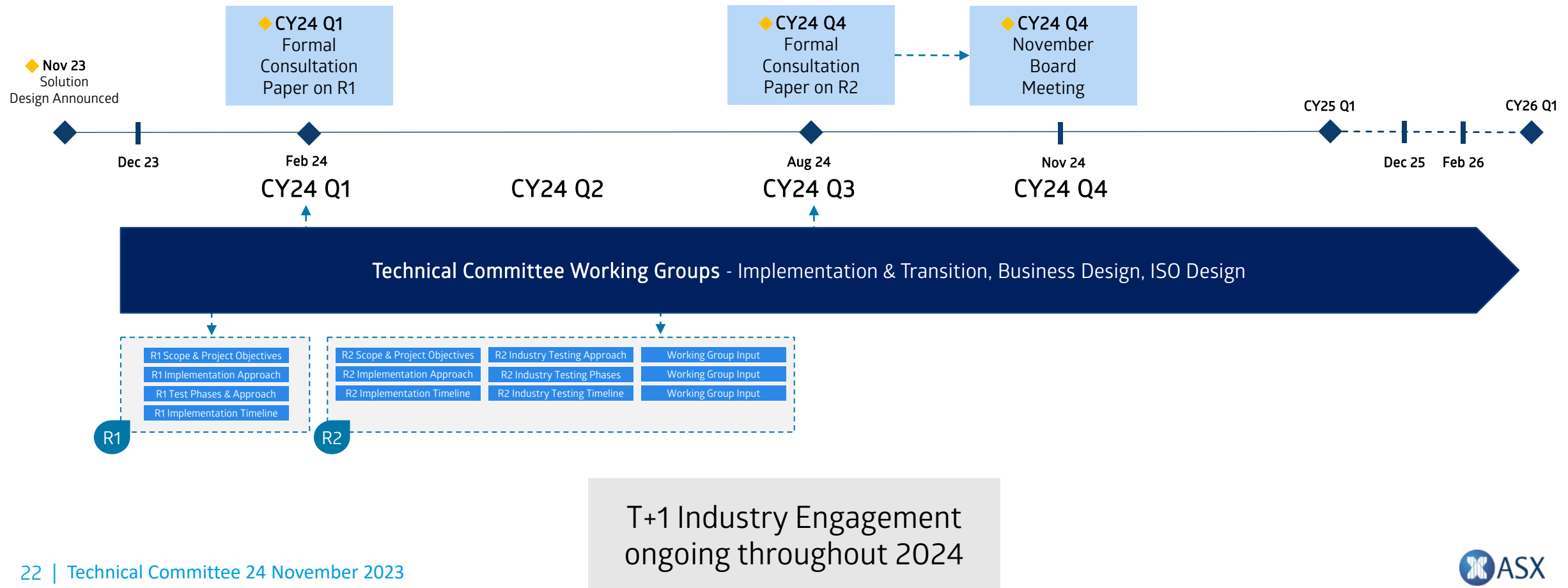
These objectives have led to specific areas of focus. For CY2023, this involved setting up more interactive industry engagement channels and setting up for success post-announcement. For CY2024, this involves utilising member feedback to deliver smooth, focused engagement during detailed design and consultation.

Industry Feedback Objectives	2023 Focus	2024 Focus	Key Activities
Increase Transparency & Stakeholder Input	Scope, implementation, connectivity & messaging	Detailed design, implementation planning, project timelines	Release 1 & 2 Consultation Industry, Business, ISO Working Groups TC, BC, Advisory Group, bilaterals & Industry Forum engagement
Improve Governance & Communications	Setting TC for success, timely & relevant communications,	Smooth & efficient capture & dissemination of information to industry	TC and working group processes & documentation Timely distribution of communications
Expedite problem solving	Starting and improving feedback processes from industry, focus on "point in time" performance	Baseline industry feedback post-announcement – work to continually improve	Baseline TC pulse survey post-announcement & set targets Ad-hoc surveys to track effectiveness of working groups & consultation Regular feedback loop to industry from ASX via TC, BC, AG
Timely & effective feedback	Starting and improving feedback processes from industry, focus on "point in time" performance	Baseline industry feedback post-announcement – work to continually improve	Baseline TC pulse survey post-announcement & set targets Ad-hoc surveys to track effectiveness of working groups & consultation Regular feedback loop to industry from ASX via TC, BC, AG
Proactive change management	Managing change during CHES replacement solution definition stage	Proactively forecasting for and planning for change with industry	Robust and early engagement on consultation processes Prioritising industry issues and areas of interest for consultation Casting a wide net of industry stakeholders during consultation processes
Rationalisation of engagement workload	Solving "point in time" engagements with industry, dialling up and down engagement dependent on topic	Building fewer, smoother operating engagement models for the detailed design & consultation stage	Use proven industry working group model to support design & consultation Use working groups at a tactical level to support TC governance role Prioritise working group agendas to focus on areas of most industry interest

05 – Stakeholder engagement in CY2024

Planned public consultation timeline summary

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. Once the design consultation is progressed, ASX will consult on amendments to its Operating Rules.

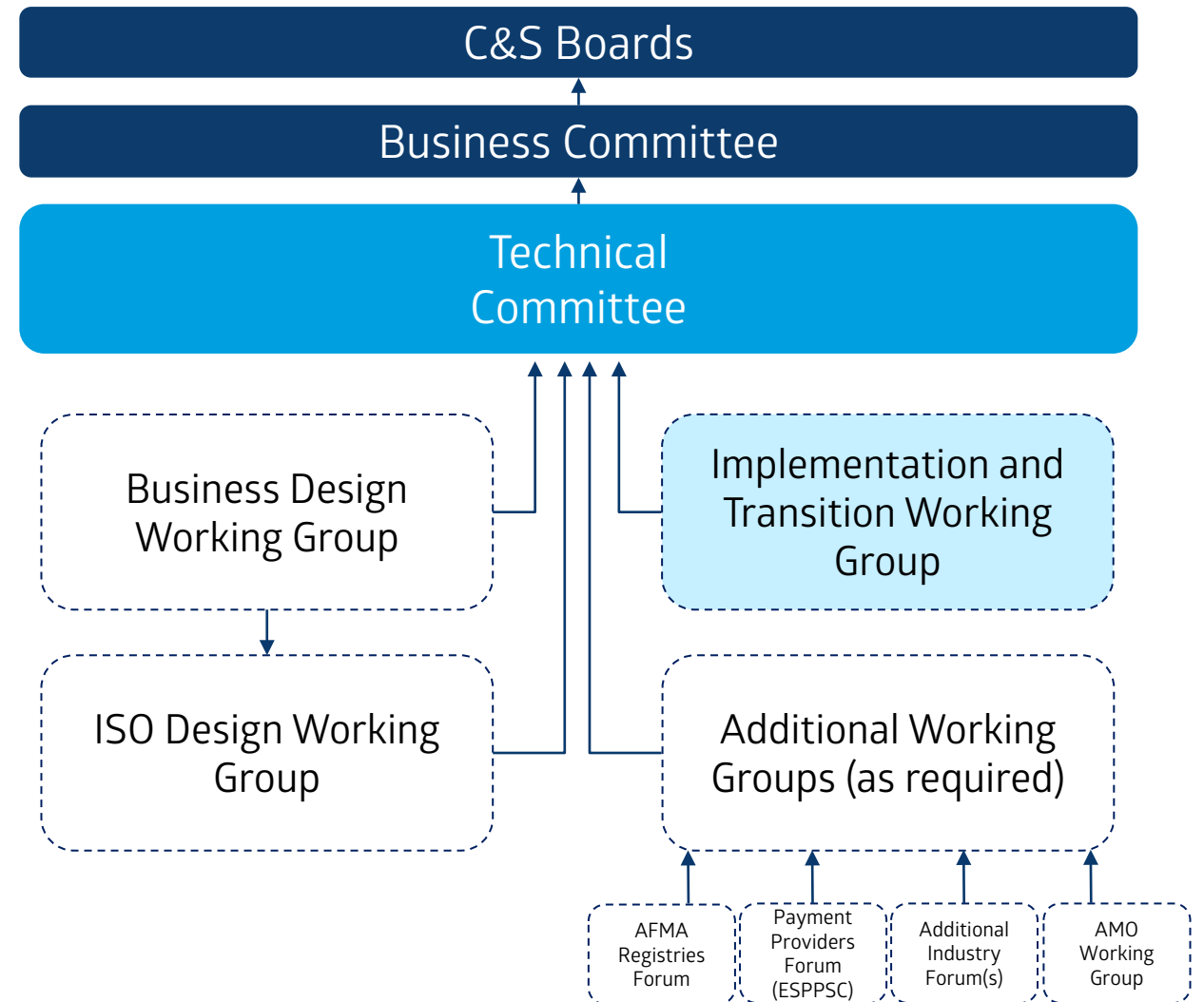


05 – Stakeholder engagement working groups

Moving forward

In addition to the Business and ISO Design Working Groups initially proposed in the 8 November Committee, ASX proposes introducing the Implementation and Transition Working Group (ITWG).

- › [Implementation and Transition Working Group \(ITWG\)](#)
 - Responsible for implementation planning
 - Will be consulted on plan, cutover, migration and testing
- › [Business Design Working Group \(BDWG\)](#)
 - Responsible for the functional design of any new/changing scope
 - Includes Business and Operational SMEs from relevant organisations
- › [ISO Design Working Group \(IDWG\)](#)
 - Responsible for the ISO20022 message designs and flows
 - Will be consulted on all messages
 - Includes Technical SMEs from relevant organisations
- › [Additional Working Groups](#)
 - Members and responsibilities as required



05 – Stakeholder engagement working groups

Implementation and transition working group

The purpose of the ITWG is to develop a market-wide implementation and transition plan to support users' transition from CHES over two releases.

Responsibilities

- Be a key forum for ASX to communicate with industry stakeholder representatives on the implementation and transition of CHES replacement in Australia's equity post trade environment
- Be a key forum to help guide stakeholders individual implementation and transition plans
- Members of the working group are expected to provide advice and expertise to help define and shape market wide implementation and transition plans

Key Topics

- Release 1 (AMOs and Clearing Participants)
 - Phased implementation approach
 - Industry testing phases and approach (scope of testing, ASX and Market roles)
 - Implementation Timeline
- Release 2 (C&S Participants, Payment Providers, Issuer (Registries), Software Providers)
 - Implementation approach
 - Industry Testing phases and approach (scope of testing, ASX and Market roles)
 - Implementation Timeline

Next Steps

- Agree membership. Committee members are asked 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.
- 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.

05 – Stakeholder engagement

Industry Consultation Topics

ASX will consult with the industry on:

Release 1 – Clearing

- Business scope items and their business design
- Demonstration of and consultation on, how the vendor solution fits to deliver the market objectives for Release 1
- Market impacts and backward compatibility safeguarding impacts to all market participants other than AMOs
- How technical enablement aimed for R1 de-risks R2 implementation and delivers towards the target solution
- Industry testing approach, cutover & migration approach and delivery timeline

Release 2 – Settlement & Sub-register

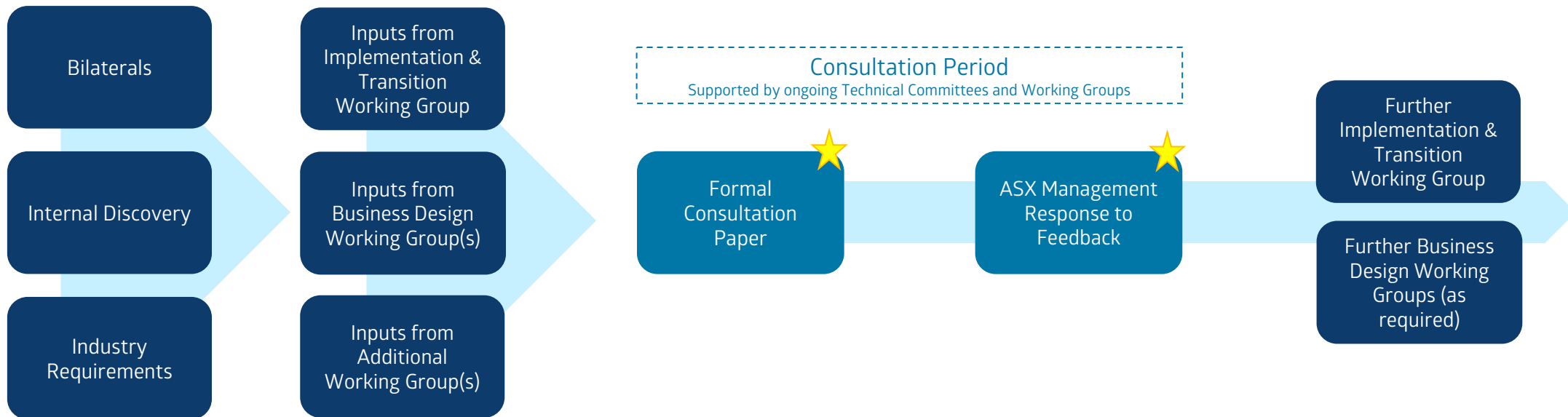
- Business scope items and their business design
- Demonstration of and consultation on, how the vendor solution fits to deliver the market objectives for Release 2
- Market impacts and activities required by market participants and software providers
- Industry testing approach, cutover & migration approach and delivery timeline
- Opportunities to mitigate risks further through various testing options (e.g. industry parallel testing)

Macro Industry Factors

- Industry progress on T+1 or other macro industry factors

05 – Stakeholder engagement consultation

Public consultation model



Once the design consultation is progressed, ASX will also consult on amendments to its Operating Rules.

05 – Stakeholder engagement

Industry Consultation Topics

Proposed business design workshops (CY24+)

	Proposed Topic	Release	Scope Objectives	Applicable Users
1	Clearing Design (Trade Acceptance & Netting)	Release 1 & Release 2	4.1, 5.3	AMOs, Clearing Participants, Settlement Participants
2	Settlement Design (Batch Settlement Process)	Release 2	4.2, 5.3	Clearing Participants, Settlement Participants, Payment Providers
3	Registration Details & Investor Information	Release 2	1.1, 3.6	Settlement Participants, Issuer Registries
4	SRN & Issuer Sponsored	Release 2	1.3, 1.4	Settlement Participants, Issuer Registries
5	Cum Entitlement Balances Design Review	Release 2	NEW	Settlement Participants, Issuer Registries
6	Corporate Actions (DRP, Entitlements, Distribution Information)	Release 2	3.2, 3.3, 3.5, 3.7, 3.8	Settlement Participants, Issuer Registries
7	Payments	Release 2	4.5, 3.2	Payment Providers, Settlement Participants, Issuer Registries
8	Data Access (Holdings)	Release 2	1.6	Settlement Participants, Issuer Registries
9	Settlement Instructions (Matching, Non-Batch DvP, Linking, Locking)	Release 2	1.5, 2.1, 2.2, 2.6, 4.3, 4.4, 4.5	Settlement Participants
10	Market Claims (Diary Adjustments)	Release 2	3.1	Settlement Participants

Note: indicative order, subject to change based on industry inputs and further planning. Multiple sessions may be required per topic.

05 – Forward plan

Proposed Committee Schedule for CY2024

TC Meeting	Proposed Date	Time
February meeting	Wednesday 7 Feb	2pm – 4pm
March meeting	Thursday 7 March	2pm – 4pm
April meeting	Wednesday 3 April	2pm – 4pm
May meeting	Wednesday 1 May	2pm – 4pm
June meeting	Thursday 6 June	2pm – 4pm
July meeting	Wednesday 10 July	2pm – 4pm
August meeting	Wednesday 7 Aug	2pm – 4pm
September meeting	Wednesday 11 Sept	2pm – 4pm
October meeting	Wednesday 9 Oct	2pm – 4pm
November meeting	Wednesday 6 Nov	2pm – 4pm
December meeting	Thursday 5 Dec	2pm – 4pm

BC Meeting	Proposed Date	Time
March meeting	Wednesday 20 March	12pm – 2pm
June meeting	Wednesday 26 June	12pm – 2pm
September meeting	Wednesday 18 Sept	12pm – 2pm
December meeting	Wednesday 11 Dec	4pm – 6pm



Q4 pulse survey to be issued to members following the November TC

06 – Delivery partners

06 - ASX is also partnering with Accenture

Accenture is a global leading solution integrator



Accenture has strong capabilities to support the delivery of the CHES replacement project, including:

> *Delivery capability*

Accenture is globally recognised as a high-quality systems integrator with a high degree of capital markets integration expertise and experience in delivering large and complex technology programs. Accenture employs over 2000 capital markets professionals who service over 450 capital markets globally. Accenture's delivery model includes onshore, nearshore, and offshore resources.

> *Testing capability*

Accenture is considered one of the top global quality engineering practices across all industries, utilising market leading technology and best practices to enhance testing processes, to optimise testing efforts and seek to achieve faster time-to-market, as well as improved product quality.

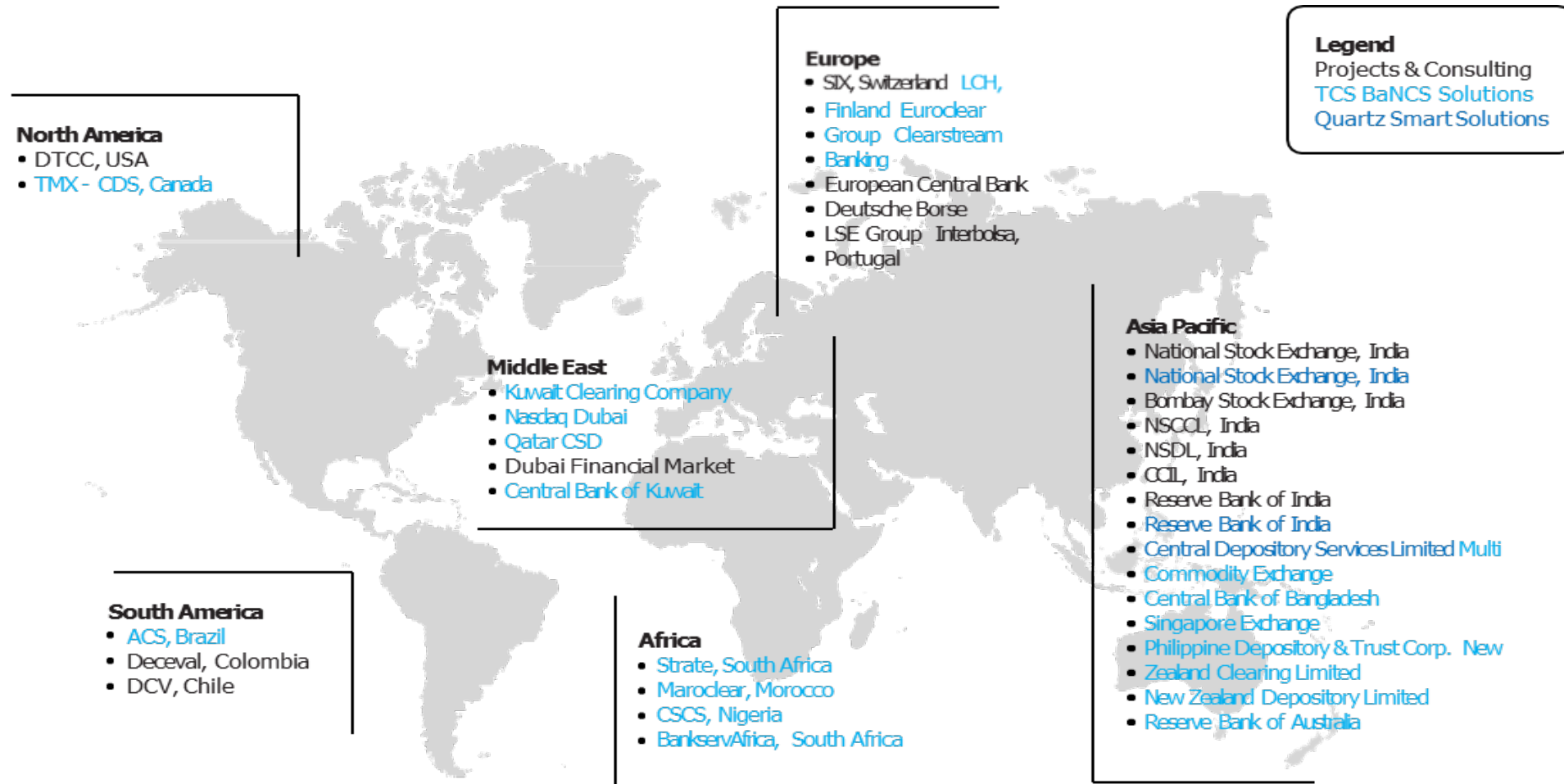
> *Key capital market infrastructure experience*

- Appointed by the Bank of England as the Technology Delivery Partner for the Real Time Gross Settlement Service Renewal Program.
- Partnered with the DTCC to design and build a prototype to settle tokenized securities.
- Partnered with a leading European exchange to managed part of their markets technology stack.
- Partnered with a leading US investment bank to reimagine the settlement process.
- Accenture is also a capital markets infrastructure participant providing a "Settlements as a Service" platform in Europe for middle and back-office processes for capital markets clients.

06 – Global Footprint

TCS is the largest Exchange neutral, independent software vendor in the Market Infrastructure space

- > TATA Consultancy Services Limited (TCS) is an IT services, consulting and business solutions organisation that has been partnering with many of the world's largest businesses in their transformation journeys for over 55 years.
- > TCS has rich experience working with Market Infrastructure organisations and the chosen product has been implemented in critical transformation programs across the globe.
- > TCS has been operating in the Australian and New Zealand markets for more than 30 years and has local headcount of more than 5,000 associates (Global employee strength ~615,000).





Q&A

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Thank you.

