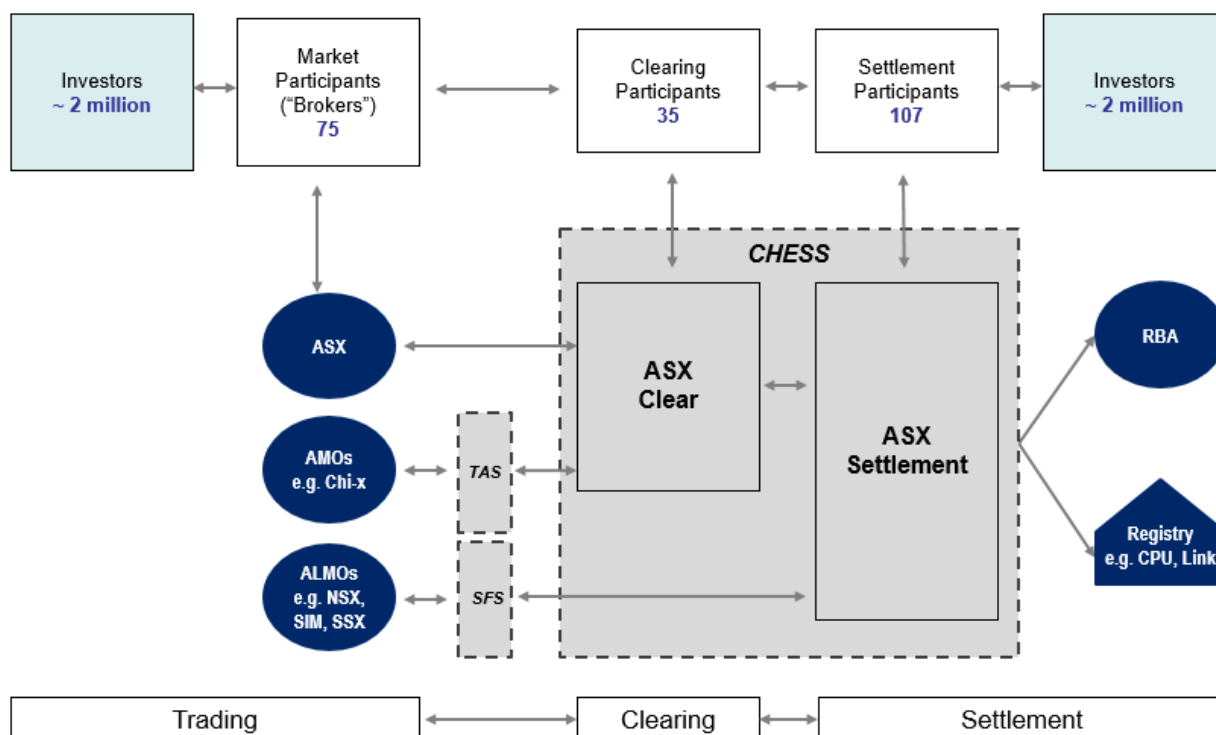


BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 1A	
Topic	Cash market clearing and settlement services - Operational performance
Date	29 November 2018
Purpose of this paper	To report on key performance metrics for ASX's clearing and settlement services.

OVERVIEW

Market Structure Overview



The clearing and settlement of equities performs a critical role in the operation of Australia's financial markets, helping to reduce counterparty and systemic risk, and provide transaction efficiency and certainty for end investors.

Core processes that provide these benefits include novation, netting and settlement.

Novation

Through a contractual process known as novation, ASX Clear becomes the seller to every buyer and the buyer to every seller, making it liable for completing all cleared transactions on the relevant market.

Novation performs two important functions:

-
- it replaces the clearing participants' credit exposures to other clearing participants by substituting the clearing house as the central counterparty; and
 - it maximises capital efficiency for clearing participants by permitting a single net exposure to be calculated and collateralised between the clearing house and each clearing participant.

Through novation, ASX Clear provides protection to non-defaulting clearing participants (and, indirectly, their clients) from the inability of a defaulting clearing participant to meet its obligations.

A key metric for monitoring novation is the percentage of on and off market trading that is novated.

Trades submitted for clearing and settlement by any market operator are verified prior to registration by ASX Clear. If the verification conditions are not satisfied then trades are rejected. Once a trade is registered it is novated. Novation is deemed to be effective from the matching of bid/offer (on market trades) or recording of the trade (reported trades) for all trade execution venues.

Netting

ASX Clear is approved as a 'netting market', and ASX Settlement is an 'approved netting arrangement', for the purposes of the Payment Systems and Netting Act. This gives legal certainty to the netting of settlement obligations. Settlement on a multilateral net basis maximises market efficiency by reducing participant transaction and funding costs.

A key metric for monitoring netting is the percentage by which novated value is netted down for settlement. This metric is termed "netting efficiency".

Settlement

ASX's model for settlement maximises efficiency, while minimising the risk of settlement failure. It does this by simultaneously transferring the legal ownership of shares and facilitating the transfer of money for those shares. This is done through a Model 3 multilateral net batch settlement mechanism with irrevocable settlement finality at the end of the processing cycle. The transfer of money occurs across the Exchange Settlement Accounts of payment providers in the RBA's Information and Transfer System (RITS).

A key metric for monitoring settlement is the percentage of scheduled settlement that successfully settles (i.e. the opposite of the "fail rate"). This metric is termed "settlement efficiency".

Service availability

ASX's critical processes of novation, netting and settlement and are supported in ASX's core system CHES. It is critical for market operations, that CHES remains stable and available for processing. A key metric for monitoring systems availability is the percentage of systems uptime as measured against target availability times. The service availability target for CHES is 99.80%.

For the December 2018 quarter¹, the average monthly system availability was 100.00% for CHES. The average monthly availability of CHES has been 99.99% between November 2011 and October 2018.

Trade Acceptance Service

ASX Clear and ASX Settlement's Trade Acceptance Service (TAS) provides a mechanism for Chi-X to submit trades into CHES. The CHES system performs the clearing and settlement functions.

The Trade Acceptance Service availability target for TAS is 99.80% (the same as CHES).

For the December 2018 quarter², the average monthly system availability was 100.00% for the TAS. The average monthly availability of the TAS has been 99.99% between November 2011 and October 2018 (which is the same as CHES).

¹ Up to 31 October 2018

² Up to 31 October 2018

Reporting on clearing and settlement service performance

The key metrics noted above on novation, netting efficiency and settlement efficiency for the December 2018 quarter³ are reported in Attachment A. They are also supported by charts demonstrating a longer reporting period in Attachment B.

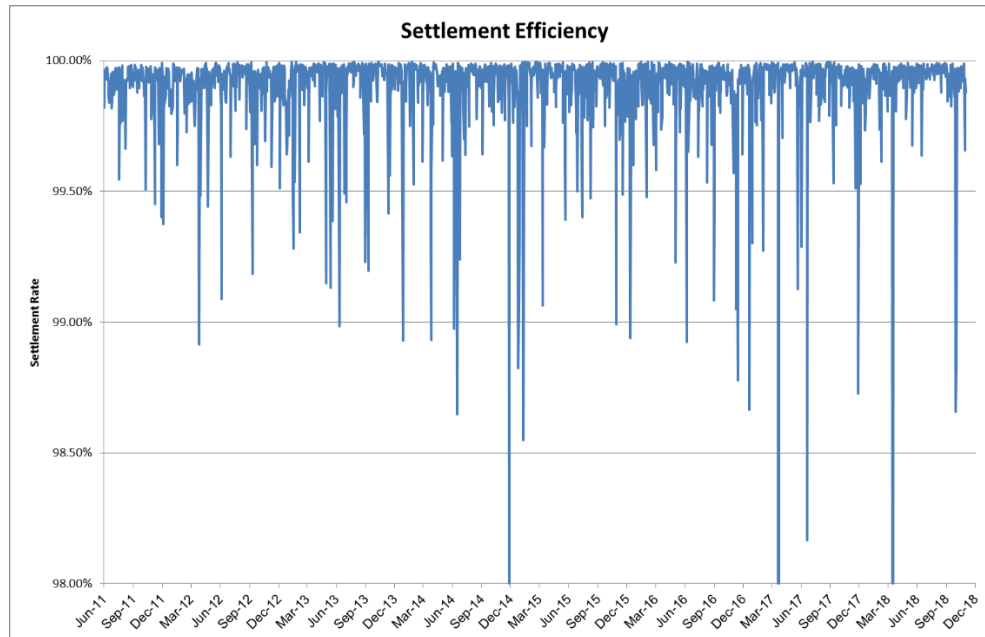
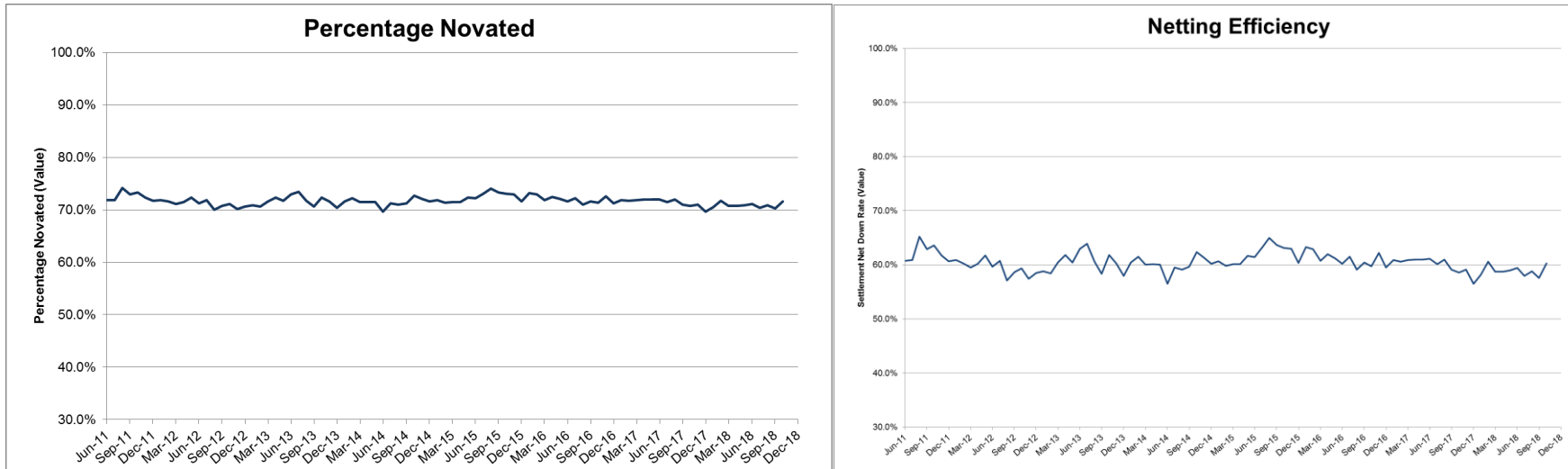
³ Up to 31 October 2018

ATTACHMENT A – SUMMARY METRICS RELATING TO THE PERFORMANCE OF ASX’S CLEARING AND SETTLEMENT SERVICES

	December 2018 Quarter ⁴	September 2018 Quarter	June 2018 Quarter
System Availability (CHESS)	100%	100%	100%
System Availability (TAS)	100%	100%	100%
Total Trades Accepted (ASX)	31,344,552	82,955,381	73,641,975
Total Trades Rejected (ASX)	0	4	16
Total Trades Accepted (Chi-X)	10,379,128	27,723,310	26,468,494
Total Trades Rejected (Chi-X)	0	0	2
Daily Average Traded Value (On and Off Market)	\$6.9 billion	\$6.76 billion	\$6.64 billion
Percentage Novated	71.6%	70.5%	70.9%
Daily Average Cleared Value	\$4.94 billion	\$4.76 billion	\$4.71 billion
Daily Average Cleared Value Post-Netting	\$1.96 billion	\$1.99 billion	\$1.93 billion
Netting Efficiency	60.3%	58.1%	59.0%
Daily Average Settled Value (Including Non-Novated)	\$9.7 billion	\$10.4 billion	\$10.2 billion
Settlement Efficiency	99.88%	99.95%	99.94%
Total Settlements (SSX)	0	0	0
Total Value of Settlements (SSX)	\$0	\$0	\$0
Total Settlements (NSX)	112	425	548
Total Value of Settlements (NSX)	\$338,125	\$2,933,379	\$2,471,014

⁴ Up to 31 October 2018

ATTACHMENT B – PERFORMANCE OF ASX'S CLEARING AND SETTLEMENT SERVICES FROM JUNE 2011 TO October 2018



BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 1B	
Topic	ASX Technology Governance and Operational Risk Management
Date	29 November 2018
Purpose of this paper	To update Business Committee members on ASX's enterprise risk and technology strategy and its implications for CHES replacement

OVERVIEW

Over the past 12 months, ASX has continued to embrace new technology as part of a program to build stronger foundations at ASX. There are a number of activities underway to continue to strengthen capabilities to deliver and maintain the standards that ASX, our customers and regulators expect.

ASX has worked productively with ASIC and the RBA in pulling this program together¹. This has included identifying areas for improvement that support ASX's goals to remain resilient and competitive. The changes will also enhance the trust and confidence of those who interact with ASX's financial market infrastructure.

ASX has materially progressed initiatives over the past two years (platforms, processes and policies) which are focused on enhancing the infrastructure and processes that will ensure ASX maintains its reputation for resilience and integrity and are critical to the functioning of Australia's financial markets.

In addition to enhancing operational and enterprise risk management, technology governance and cyber security, ASX is bringing forward our technology replacement programs so that when the replacement of CHES is implemented in early 2021, we will have little material legacy technology.

These technology governance and enterprise risk management initiatives will also assist in managing large scale projects such as CHES replacement.

There will be a presentation at the meeting from ASX's Chief Risk and Chief Operating Officers on the initiatives ASX is undertaking.

¹ These issues are also covered in ASIC Report 592, *Review of ASX Group's technology governance and operational risk management standards*.

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 2A	
Topic	CHES Replacement – Program Update
Date	29 November 2018
Purpose of this paper	Members will be provided with a program update including software development and customer engagement activities.

OVERVIEW

The CHES Replacement project is tracking to its delivery plan, with stakeholder focus groups and the Connectivity and Integration working group now underway.

The delivery of the first tranche of customer technical documentation is on schedule for December 2018.

A pricing framework for the different connectivity models i.e. traditional message-based connectivity versus direct connectivity with a DLT node, has been accelerated to address stakeholder feedback that it is needed for internal planning and budget cycles. ASX is committed to making this information available as soon as practically possible. This will ensure stakeholders have pricing information prior to the commencement of customers’ own internal development and testing.

Software Development Update

Software development continues from both Digital Asset (DA) and ASX to build and test the solution and is tracking to plan.

DA released the latest version of the DAML Software Development Kit (SDK) in mid-October, containing the updated Ledger API which will be used to connect to the CHES Replacement solution. The SDK is needed for any organisation expecting to develop their own interfaces or applications; organisations yet to apply can do so via DAML.com.

The ISO 20022 work on ‘to-be’ message mapping state is in progress. See agenda item 2d for further details.

Stakeholder Engagement Activities

Connectivity & Integration Working Group

A series of Connectivity and Integration working group meetings with industry stakeholders have now convened.

Connectivity and Integration working group meetings provide a forum where ASX can furnish a broad range of interested parties with more details around the different connectivity and integration options. The working group kicked off with a webinar on 3 October, with over 250 registered attendees, with the objective of level-setting the industry’s understanding on the different connectivity options available, and to answer as many of the common questions as possible.

This was followed up with a second webinar on 18 October, targeted at clearing and settlement participants and their vendors, with over 120 registered attendees, with the objective of providing further details around direct integration i.e. taking a node. This included topics such as the Ledger API, mutualisation of data, data streaming and example use cases.

Following the two webinars, the working group adopted a classroom style environment, with participants invited to attend in person, to facilitate a more collaborative and interactive level of engagement. Topics to

date have included looking at the two different connectivity paths available for traditional (indirect) messaging to the new system – Advanced Message Queuing Protocol (AMQP) and SWIFTNet.

The AMQP working group was held on 31 October and focused on why ASX selected AMQP, key features of AMQP and the relative ease with which it can be incorporated into new or existing message gateways. ASX also provided a simple demonstration of creating a new account using AMQP as the transport layer. The presentation slides are provided in Attachment A.

The SWIFTNet working group was held on 13 October and focused on SWIFT and its services, along with CHES Replacement specific considerations with regards to configuration and BIC use. The presentation slides are provided in Attachment B.

The next working group is scheduled for 4 December and will look at direct integration, including key commands and functions of the Ledger API and an introduction to master contracts by providing a demonstration on account opening.

The final working group for 2018 will be on 12 December and will introduce the technical documentation that will be made available in the first tranche as well as providing a demonstration on how to navigate the documentation. SWIFT will also provide a demonstration on how to test developed ISO 20022 message formats by using the MyStandards readiness portal. This working group will be facilitated via webinar to accommodate the expected number of stakeholders that will be interested in attending.

Planning is underway for the series of Connectivity and Integration working group meetings to be convened in 2019. The Implementation and Transition working group will be kicked off in Q1 2019.

Focus Groups

Focus groups provide ASX the opportunity to test, with a small subset of industry stakeholders, a proposed solution design for new features prior to the release of technical documentation. This includes asking participants and other users, where applicable, to consider key design principles and to respond with examples and rationale if they consider the proposed solution to be sub-optimal.

Two focus groups have been held to date. The first focus group was held on 31 October and looked at standardising holders' registration details and additional account features (e.g. capturing the legal name of each registered holder).

The second focus group was held on 7 November and looked at demand transfers and settlement instructions, including changes to bilateral transaction matching criteria, linking of settlement instructions, locking of CHES holdings for the purpose of settlement and the new non-batch DvP bilateral settlement instruction.

A third and final focus group for 2018 is to be held on 28 November and will look at our real-time payment service with members from the Equity Settlement Payment Providers Sub-Committee (ESPPSC).

As noted above, the output from the focus groups will be appropriately reflected in the technical documentation that will be made available to all relevant parties.

Planning is underway for the series of focus groups to be convened in 2019.

Technical Documentation

The next significant stakeholder engagement milestone is the release of the first tranche of technical documentation in December 2018. Each tranche is being made available at least three months prior to its respective incremental software drop into the customer development environment for testing.

Stakeholders will access technical documentation via ASX Online or the CHES Replacement webpage and will need to register their details.

Content will be structured in a wiki (online) style for ease of reference and to support the iterative approach to the release of technical documentation.

As noted above, a webinar is scheduled for 12 December to walk stakeholders through the first release of technical documentation.

ATTACHMENTS

Attachment A – Connectivity & Integration Working Group meeting materials – AMQP

Attachment B – Connectivity & Integration Working Group meeting materials - SWIFTNet

CHES Replacement Project

**Connectivity & Integration
Working Group
AMQP Integration**

Commercial in Confidence

31 October 2018

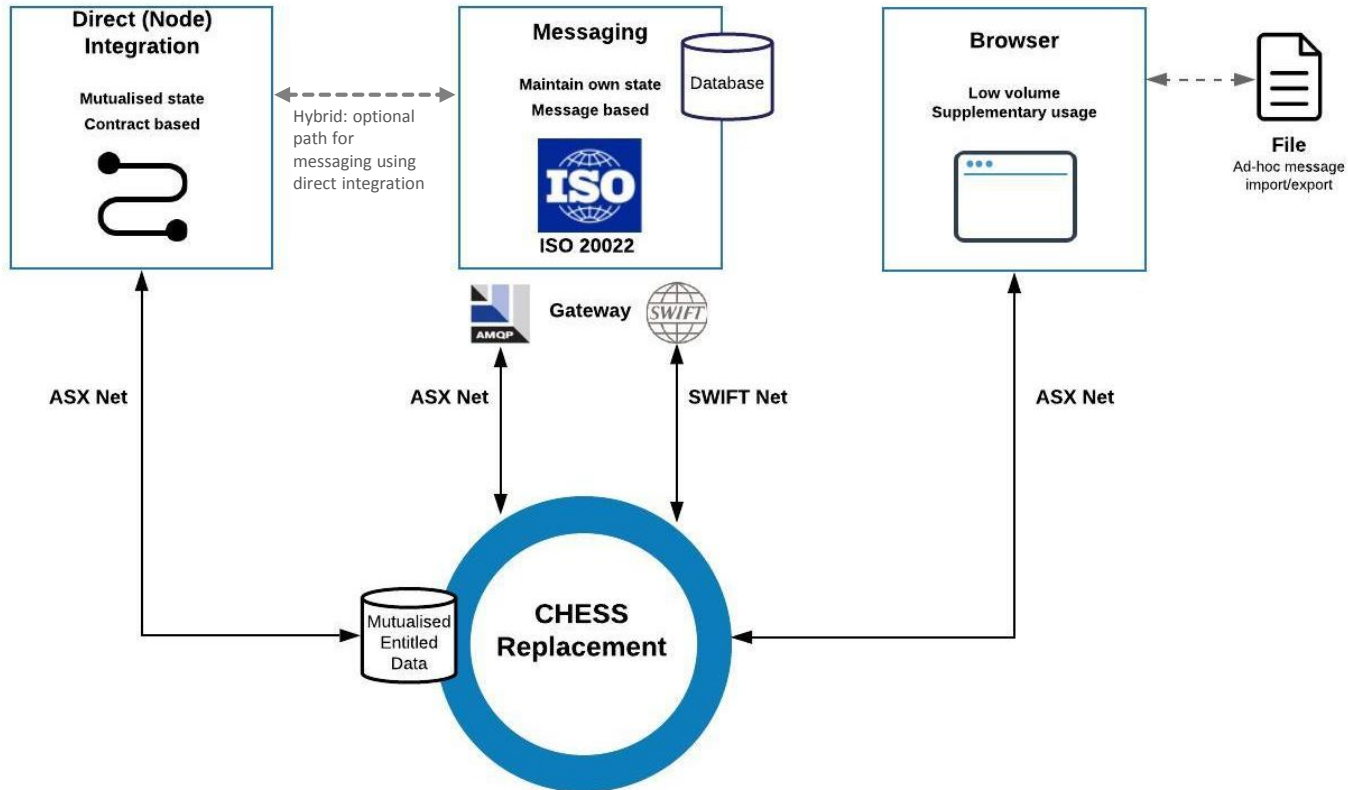
Important Information – Competition Law Policy

Agenda item 2A – Attachment A

Working group members are reminded to have regard to their obligations under competition law. In particular, please note recent changes to the Competition and Consumer Act to prohibit 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.

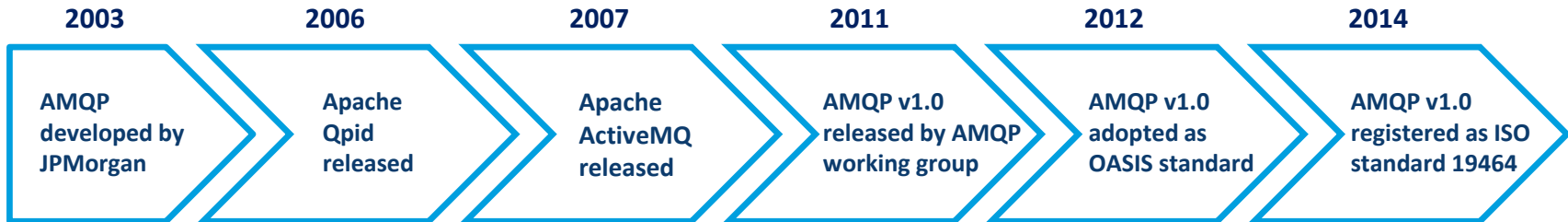
- > Introduction
- > AMQP v1.0
- > AMQP in CHES Replacement
- > ISO 20022 XML Message Overview
- > ASX's AMQP User Experience Demonstration
- > Programming Guide
- > Questions

Connectivity Options



AMQP v1.0

- **AMQP – advanced message queuing protocol**
- **Application layer ‘wire-level’ protocol to move messages between applications**
- **AMQP is a specification, not a product**
- **v1.0 defines message protocol only, not broker architecture**
- **Not tied to a specific source or target topology**
- **Multi-language support including C++, Java, and Python**

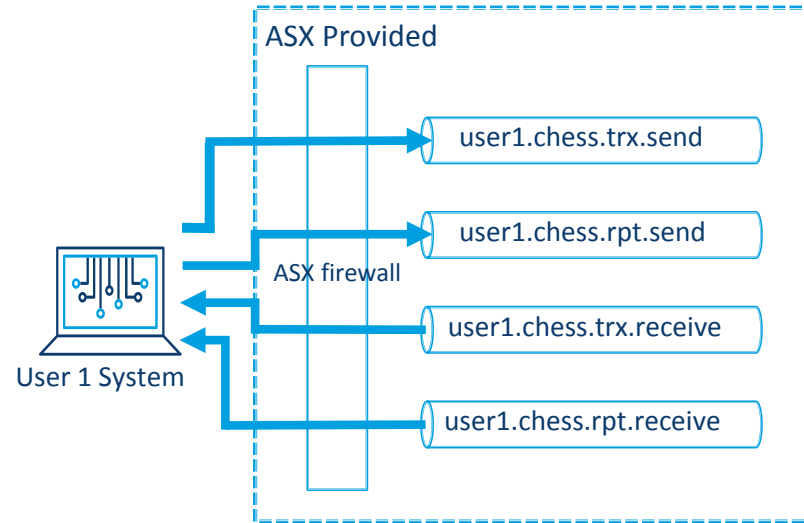


- **Connection** – network TCP connection to an AMQP server instance
- **Session** – bidirectional conversation between two devices
- **Producer** – user or system responsible for the creation of messages
- **Consumer** – user or system responsible for removing messages from a queue
- **Queue** – ordered collection of messages
 - **ASX Queue Properties:**
 - **Static** – created by broker based on predefined configurations
 - **Durable** – queue persists after broker restart
 - **First in, first out (FIFO)** – messages placed in the queue first will be consumed first
 - **ASX to define user message and business acknowledgment requirements**

AMQP in CHESS Replacement

Features

- **Four dedicated, durable queues per customer**
- **ASX will define customer queue and endpoint naming convention**
- **Access to broker via ASX Net or internet VPN**
- **Connections secured with multifactor authentication, including TLS**
- **All ingress and egress messages in ISO 2002 XML format**





Security

- All connections via ASX Net or internet VPN
- Multi-factor authentication



Queues

- User dedicated transaction and reporting queues
- Durable – persist even after user disconnection



Messages

- ISO 20022 XML format
- Signed by sender to guarantee authenticity and auditability



Reliability

- ASX-defined message acknowledgement procedure
- ASX will define message persistence within broker



Performance

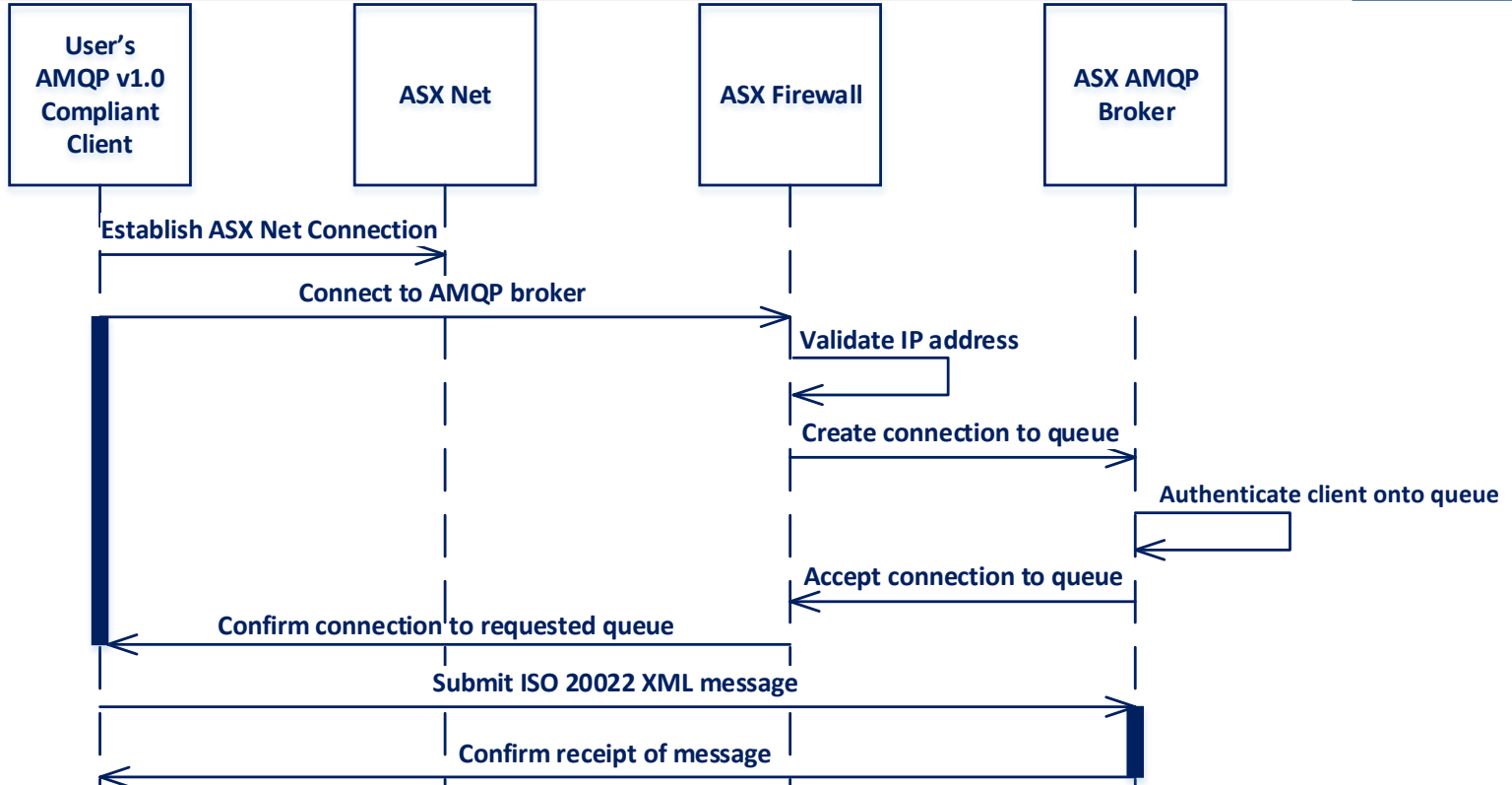
- Highly scalable solution
- Asynchronous message responses



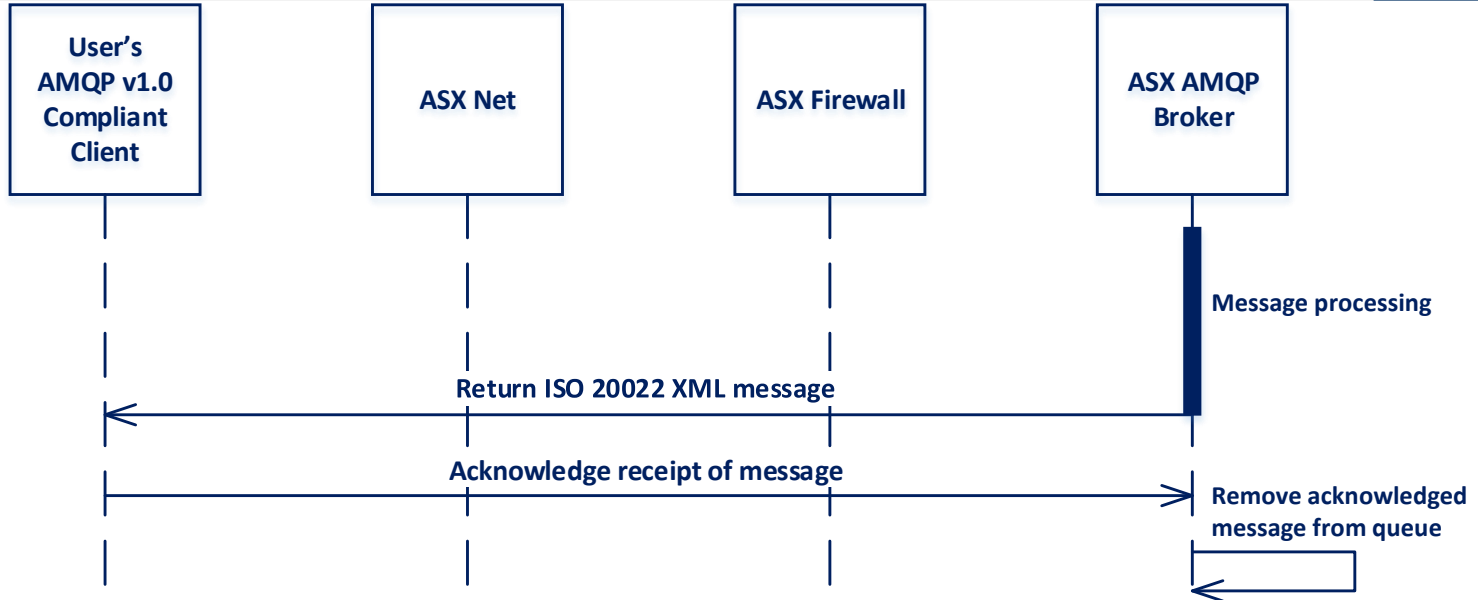
Availability

- High availability
- Failover and BCP will be covered in future sessions

AMQP Transaction Flow



AMQP Transaction Flow - Continued



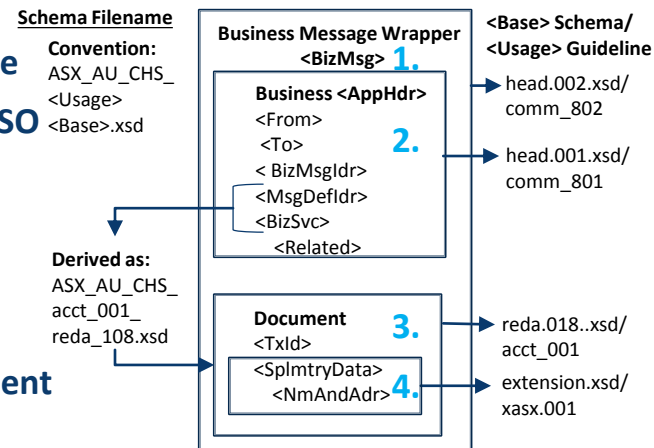
ISO 20022 XML Message Overview

Sample CHES Replacement Business Event

AMQP Account Creation using ISO 2002 XML

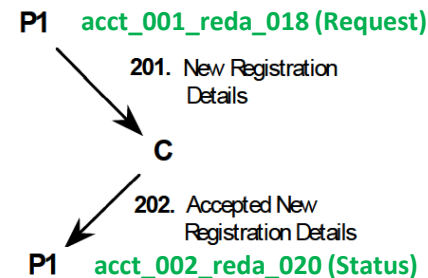
ISO 2002 in a nutshell

- 2-layer model with proprietary Transport and ISO 2002 Business Message
- Business Message consists of Business Application Header and choice of ISO document schemas
- Document Schema filename derived from BAH elements
e.g. <MsgDefldr>reda.018, <BizSvc>acct_001 (ignoring version)
- BAH/ISO Signature to be introduced in later CDE release
- For AMQP, ASX Business Message Wrapper encapsulates BAH and Document XML payload (InterAct header for SWIFTNet)



Business Events

- Market Practice in conjunction with CHES Replacement ISO 2002 Technical Committee
- Account Creation event using
acct.001 Securities Account Creation Request &
acct.002 Securities Account Status Advice



AMQP Input to CHES Replacement

- acct_001: Securities Account Creation Request

1. BizMsg

```
<BizMsg xmlns="urn:iso:std:iso:20022:tech:xsd:head.002.001.01"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation
="urn:iso:std:iso:20022:tech:xsd:head.002.001.01
ASX_AU_CHS_comm_802_001_01_head_002_001_01.xsd">
  <AppHdr>
    ...
  </AppHdr>
  <Document>
    <SctiesAcctCreReq>
      ...
      <SplmtryData>
        <Envlp>
          <Document>
            ...
          </Document>
        </Envlp>
      </SplmtryData>
    </SctiesAcctCreReq>
  </Document>
</BizMsg>
```

2.

3.

Party Identifier
to-be choice
of UIC and BIC

2. AppHdr

```
<AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xmlns:n1="http://www.w3.org/2000/09/xmldsig#"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.001.001.01
ASX_AU_CHS_comm_801_001_01_head_001_001_01.xsd">
  <Fr>
    <Orgld><Id><Orgld><Othr>
      <Id>01403</Id>
    </Othr></Orgld></Id></Orgld>
  </Fr>
  <To>
    <Orgld><Id><Orgld><Othr>
      <Id>00001</Id>
    </Othr></Orgld></Id></Orgld>
  </To>
  <BizMsgldr>01403|AccountOCF533405|00</BizMsgldr>
  <MsgDefldr>DRAFT6reda.018.001.01</MsgDefldr>
  <BizSvc>acct_001_001_02_lp</BizSvc>
  <CreDt>2018-10-26T11-10-27.223Z</CreDt>
  <Sgntr>
    <n1:auto-generated_for_wildcard/>
  </Sgntr>
</AppHdr>
```

ISO Signature
to-be calculated
for Business Message

3. Document

```
<Document xmlns="urn:eurosystem:xsd:DRAFT6reda.018.001.01"
xsi:schemaLocation="urn:eurosystem:xsd:DRAFT6reda.018.001.01
ASX_AU_CHS_acct_001_001_02_reda_018_001_01.xsd">
  <SctiesAcctCreReq>
    <Msgld>
      <Id>00005|AccountOCF533405|00</Id>
    </Msgld>
    <SctiesAcct>
      <AcctOwnt>
        <RltdPtyld>XASXAU2S</RltdPtyld>
        <RspnsblPtyld>XASXAU2S</RspnsblPtyld>
      </AcctOwnt>
      <Id>NONREF</Id>
      <Tp>CSDP</Tp>...
    </SctiesAcct>
    <SplmtryData>
      <sup:Document>
        xmlns:sup="urn:asx:xsd:asx.001.001.02"
        xsi:schemaLocation="urn:asx:xsd:asx.001.001.02|
ASX_AU_CHS_acct_001_001_02_reda_018_001_01_sup.xsd">
          <sup:NmAndAdr>
            <sup:Nm>Bayer Ltd</sup:Nm>
          </sup:Adr>
          <sup:Adr>
            <sup:AdrLine>51368 Leverkusen</sup:AdrLine>
            <sup:PstCd>700898</sup:PstCd>
            <sup:TwnNm>Berlin</sup:TwnNm>
            <sup:CtrySubDvsn>Berlin</sup:CtrySubDvsn>
            <sup:Ctry>DE</sup:Ctry>
          </sup:Adr></sup:NmAndAdr>...
        </sup:acct001SuplDataV01>
      </sup:Document>
    </SplmtryData>
  </SctiesAcctCreReq>
</Document>
```

4. SupData

ASX's AMQP User Experience Demonstration

What were we hoping to gain?

- **User's perspective on interacting with the ASX using AMQP messaging**
- **Incrementally build ASX's knowledge of transacting via AMQP**
- **Allow ASX to more accurately target implementation trouble areas**
- **Allow ASX to better tailor technical documentation**

Our customer experience demo includes

- **AMQP client code configuration**
- **Submitting an ISO 20022 XML acct_001 securities account creation request**
- **Returning an ISO 20022 XML acct_002 securities account status advice**
- **Placing acct_002 status advice in a user defined file location**

AMQP User Demo

Agenda item 2A – Attachment A

AMQP Programming Guide

What you need

- AMQP v1.0 compliant client
 - Download from: <https://qpid.apache.org/download.html> or <http://activemq.apache.org/download.html>
- ASX Net or internet VPN connection
- Configure your client
- Ability to create and sign ISO 20022 XML messages

Getting started with AMQP

- Apache Qpid - <https://qpid.apache.org/documentation.html>
- Apache ActiveMQ - <http://activemq.apache.org/getting-started.html>

ASX will provide

- User connection endpoints
- User queue names
- User TLS certificate
- User names (CDE day 1)
- User API key and secrets (CDE post OAuth2 implementation)

- **ASX has selected AMQP v1.0, ISO 19464**
- **AMQP is a wire protocol specification, not a product**
- **AMQP clients supporting v1.0 available in multiple languages**
- **Messages will be in ISO 20022 XML format**
- **ASX will provide:**
 - **Separate reporting and transaction queues**
 - **Connection endpoint names**
 - **TLS certificates**
- **Technical documentation coming December 2018**

Questions

Thank you

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CHES Replacement Project

**Connectivity & Integration
Working Group
SWIFTNet**

Commercial in Confidence

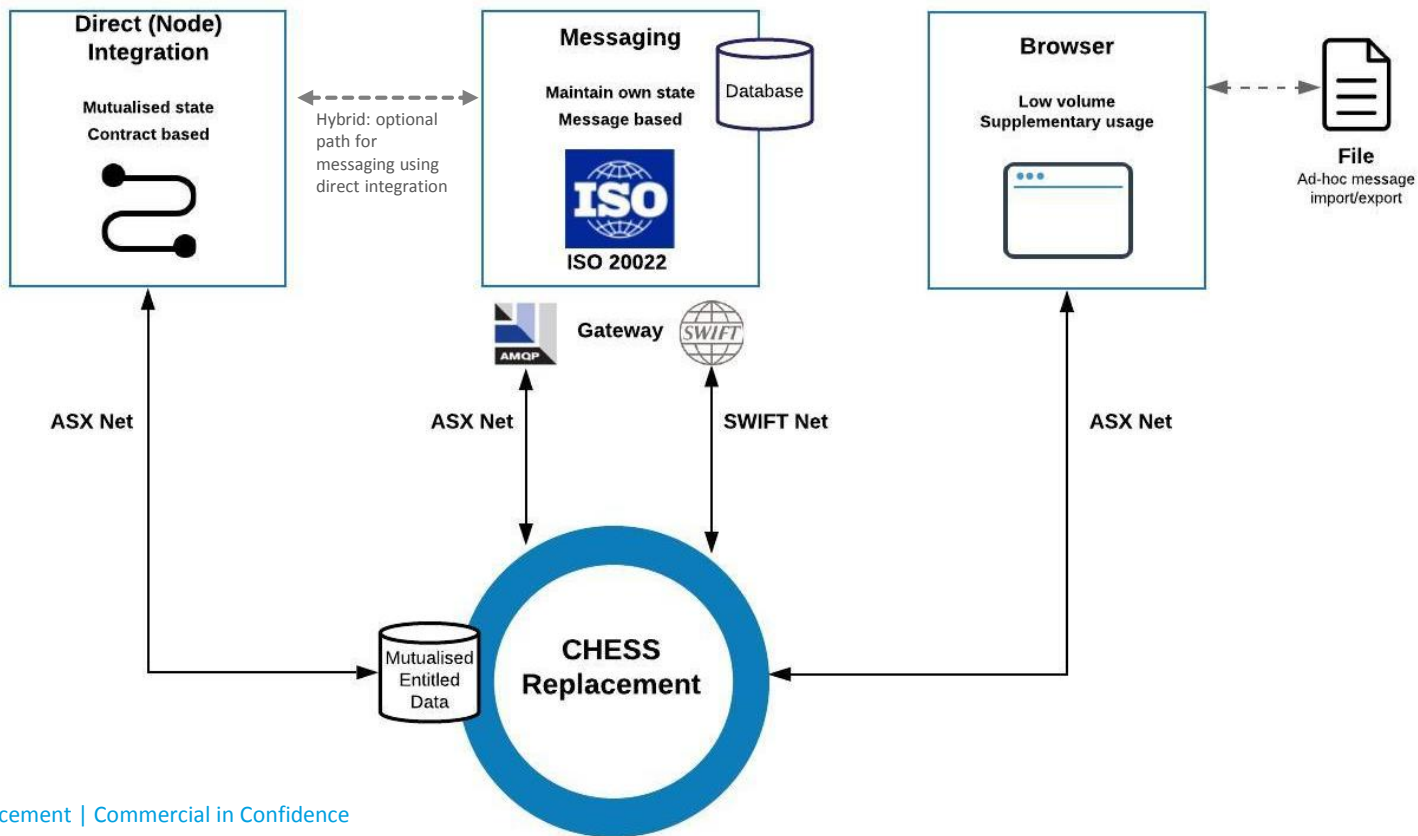
13 November 2018

Working group members are reminded to have regard to their obligations under competition law.

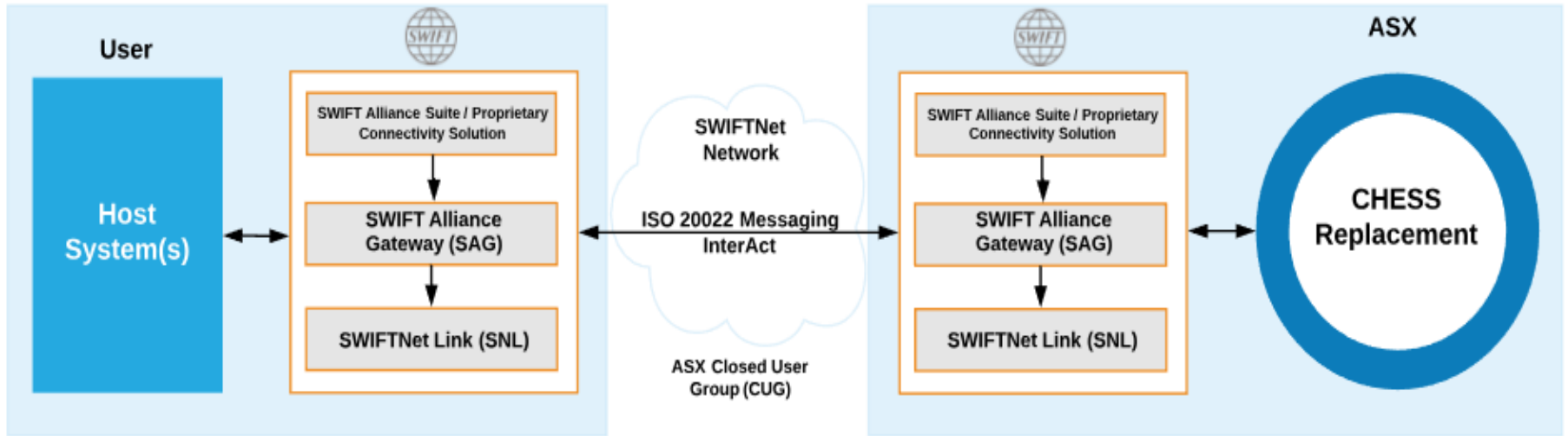
In particular, please note recent changes to the Competition and Consumer Act to prohibit a corporation from engaging with one or more persons in a concerted practice that has the purpose, effect or likely effect of substantially lessening competition.

- > Introduction
- > Overview of SWIFTNet messaging services
- > Overview of SWIFTNet user connectivity components
- > Transport of ISO 20022 Business Message
- > SWIFTNet connectivity to Customer Development Environment (CDE)
- > Complementary tools and resources
- > Timeline for CDE connectivity
- > Questions

Introduction: Connectivity Options



Introduction: SWIFTNet connectivity





Overview of SWIFTNet messaging services

13th November 2018

To use SWIFTNet services, an organisation must be a registered SWIFT user and have a Live BIC.

There are three primary options:

- a) Reuse an existing Live BIC
- b) Existing users can register for a new BIC or an additional BIC
- c) A organisation which is not currently a SWIFT user must first register and then apply for a Live BIC



Main messaging services

Message exchange

Secure and reliable messaging of formatted data, supporting ISO15022 or ISO20022.

InterAct

FIN

MI Channel

File Transfer

Exchange of data that comes in bulk (e.g. instructions, reports, statements)
Transfer of any format (e.g. images, pdf document ...)

FileAct

GUI

User-to-Application Browsing offers a lightweight and secure access.
Mainly used by Market Infrastructures to expose web applications to their participants

WebAccess

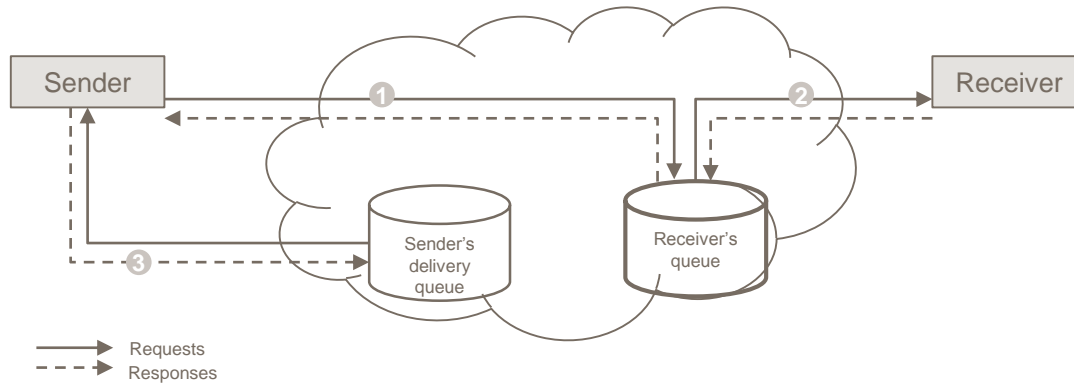
APIs

SWIFT central APIs either for public or private consumption.

APIs



InterAct Store & Forward mode



Key characteristics

- **Non-concurrent:** sender & receiver do not need to be connected simultaneously and messages are queued up to 14 days
- **Asynchronous:** sender can send multiple requests in parallel without waiting for a response
- **Load balancing & prioritization:** receiver can setup multiple queues with specific priority for each, and balance traffic over multiple queues

Process

- 1 a) Sender sends message.
b) Message stored by SWIFT in receiver's SnF queue.
c) Sender receives ACK from SWIFT upon successful storage

- 2 d) When receiver opens SnF queue, SWIFT delivers the message
e) Receiver sends User ACK to confirm delivery
f) SWIFT removes the message from the queue, providing access to the next message

- 3 g) Optionally, SWIFT creates a delivery notification for the sender, and sends it to a SnF queue defined by the sender.

SWIFTNet technical features



Closed User Group & RMA: Select your counterparties, avoid unsolicited traffic.



Validation: (MVAL) Syntax validation, allows lower exception rates and interoperability for the participants



Non-Repudiation: The customer can ask SWIFT to re-verify a message signature, to prove its origin.



Store & Forward: the sender and the receiver can operate independently



Retrieval: Lost messages can be retrieved for 124 days, for example in case of interface failure; bulk retrieval for preceding 24 hours



99.999% Availability: 3 fully redundant operating centres, 24x7 support



Role-based access control: allows participants to control who in their institution can access the application.



Delivery Notification and non-delivery warning: Confirmation when the message is delivered to the receiver



Reporting: Queue Status Report, session history report, undelivered message report



3 Levels: SNL, VPN, PKI

SWIFTNet Correspondent Names (Addressing)

The **Correspondent Names (Addressing)** are names that uniquely identify the senders and receivers of messages. They are used in the From: and To: fields of a message header, in the same way as for e-mail messages, but on SWIFTNet they are called the **Requestor and Responder DN**. They typically identify entities that are addressable, and therefore visible, to correspondents, such as branches, geographical locations, departments or business and functional units.

For FIN (MT) message address is based on BIC8 or BIC11

Example:

```
{1:F01BANKBEBBXXXX0000000000}{2:I103BANKAU2SXXXX}{3:{108:bankRef1}}{4:
:20:bankRef1
:23B:CREDE
:32A:181028EUR10000,
:33B:EUR10000,
:50K:/1234326789
Jane DOE
Avenue Adele 1 B-1310 BE
:59:/987654321
David Fergie
24 Bridge Street
Sydney
Australia
:71A:SHA
```

For InterAct / FileAct message address is based on Requestor DN and Responder DN

Example :

```
<?xml version="1.0" encoding="utf-8"?>
<IsExchangeRequest>
<Envelop>
  <Basic>
    <TransactionRef>REF10610311505</TransactionRef>
    <SWIFTRef>swri00D03-2018-10-20T06:50:10.145874.137554Z</swiftRef>
    <Requestor>cn=enctest,o=bankbebb,o=swift</Requestor>
    <Responder>cn=enctest,ou=o=bankau2s,o=swift</Responder>
    <Service>swift.eni!p</Service>
    <MsgId>20dd2b9c-769d-4cB6-9f15-aa25f0aef</MsgId>
    <RequestRef/>
    <RequestType>
    <RdIndication>FALSE<PdIndication>
  </Basic>
</Envelop>
<Payload><AppHdr xmlns="urn:iso:std:iso:20022:text:xsd:head:001.001.01"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="BusinessApp1
</Payload>
```



Distinguished Names (DN)

Level 1: Registration Authority (RA)

- top of naming tree, RA SWIFT is identified to guarantee uniqueness of SWIFTNet names

Level 2: Organisation (o)

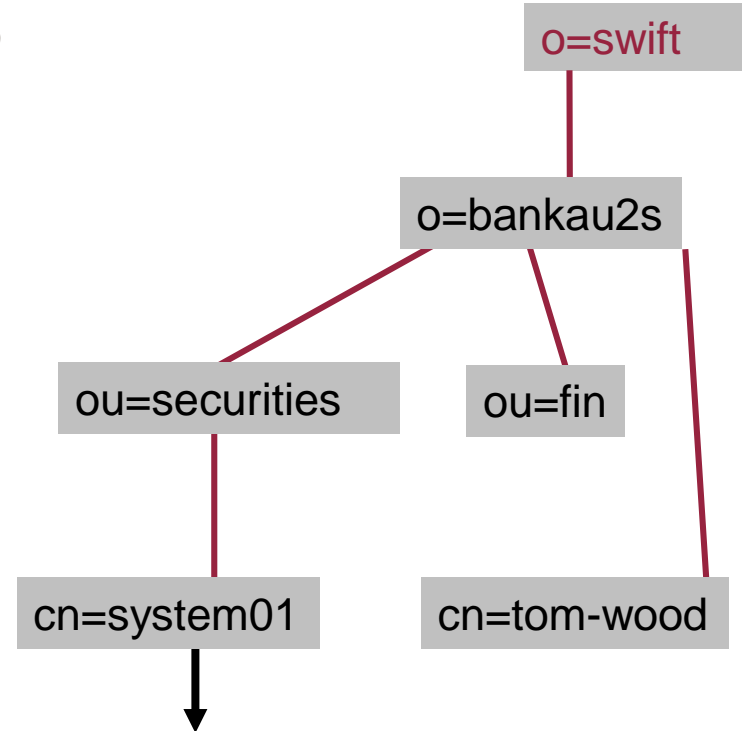
- registered by RA for institution
- name is always the BIC

Level 3: Organisational unit (ou)

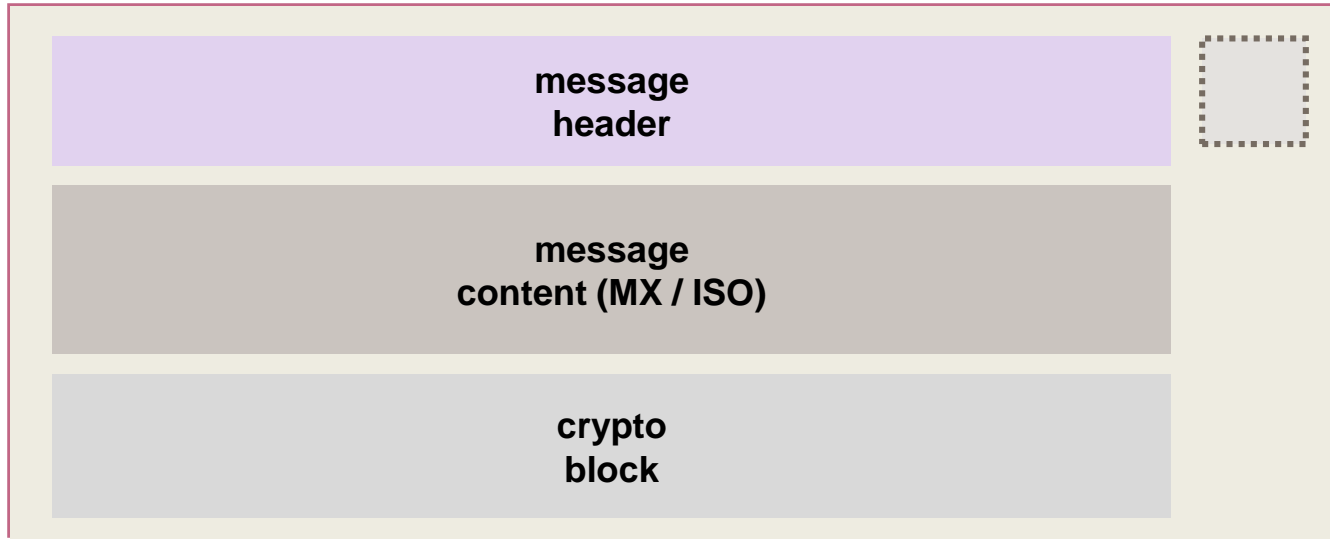
- used by institution to register operational entities by service, location or by other criteria

Level 4: Common name (cn)

- identifies operational entities like operators and applications

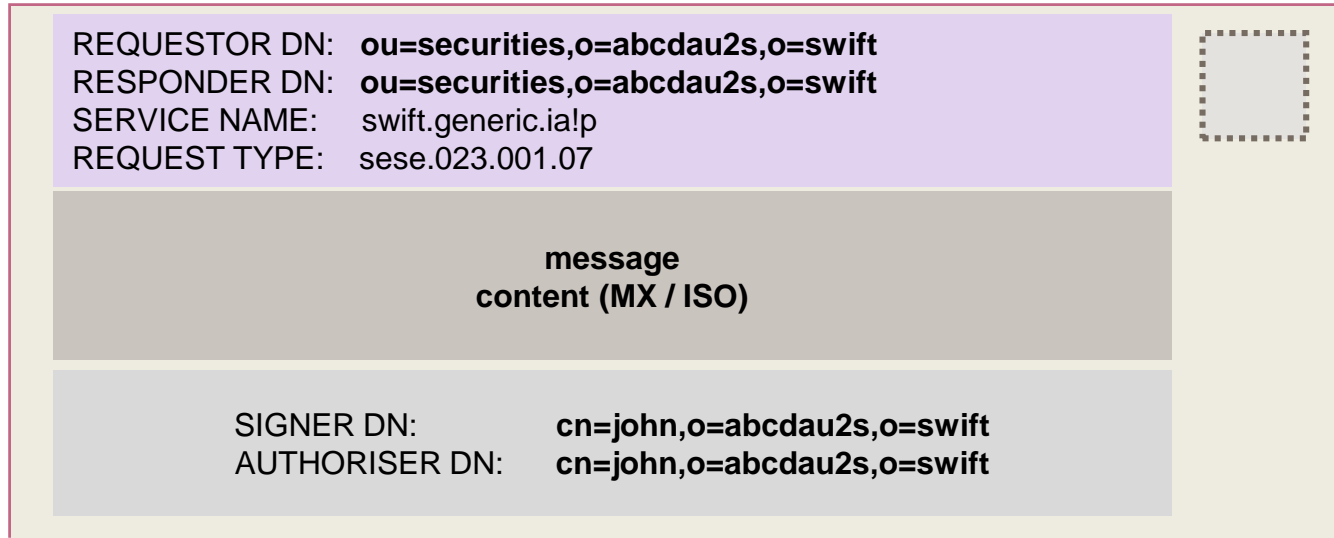


DN displayed format: cn=system01,ou=securities,o=bankau2s,o=swift



- The message header is used for addressing (identification of correspondents) and routing (transport)
- The crypto block is used for security (integrity, confidentiality and access control) and contains certificate names

SWIFTNet message Distinguished Names



- Requestor DN identifies the sender of the message
- Responder DN identifies the receiver of the message
- Signer DN identifies who is responsible for the message content (end-to-end message authentication and integrity)
- Authoriser DN identifies who is responsible for sending the message (end-to-SWIFT, to control access to SWIFTNet)

User Handbook:

- SWIFTNet Service Description -> InterAct section
- SWIFTNet Message Operations Guide -> InterAct section

All documentations are available in this link (SWIFT.com registered user login is required):

<https://www2.swift.com/knowledgecentre/productcategory>

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[Guide for new users](#)

Product category

Products A-Z

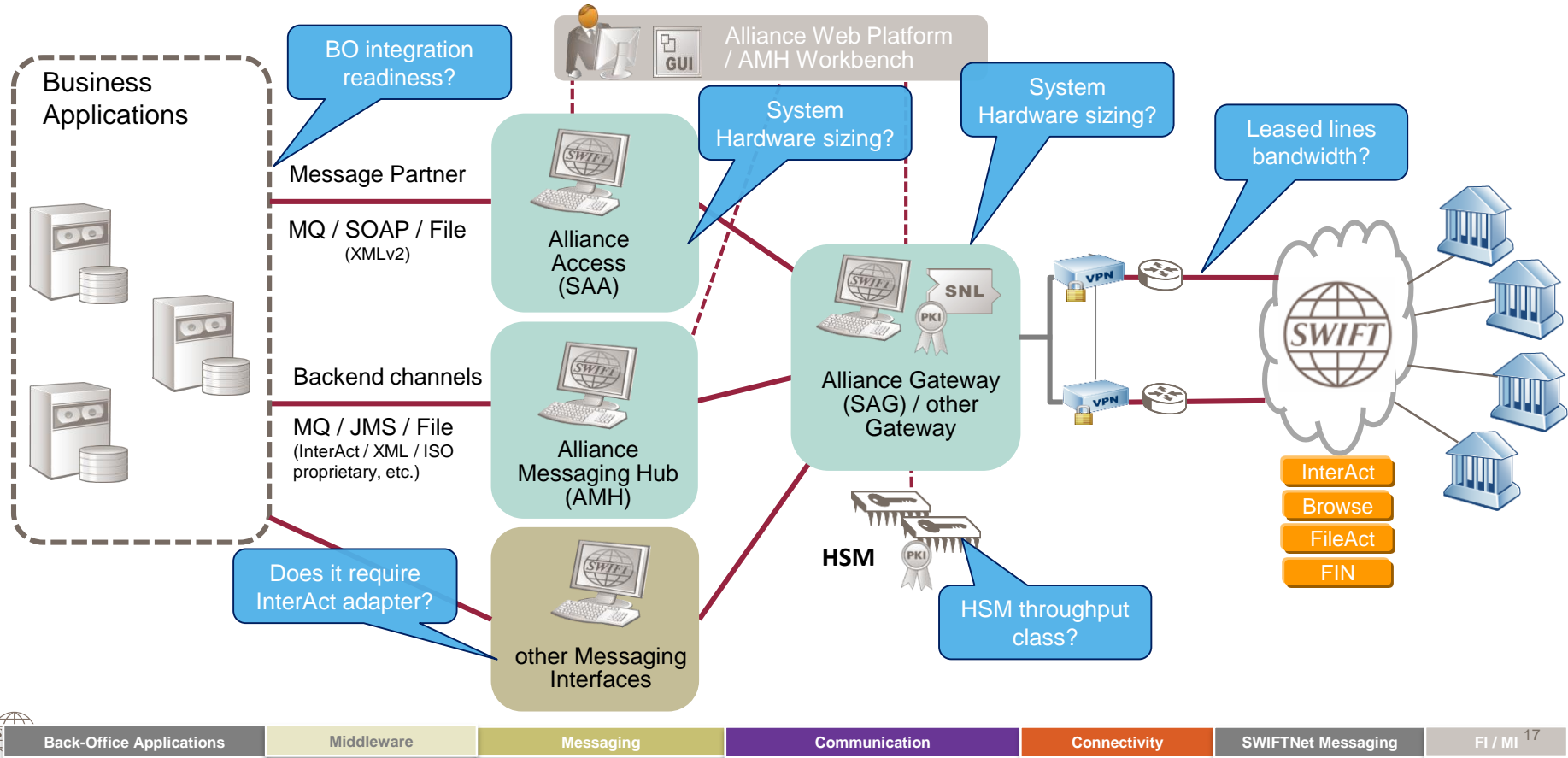
Interests



Overview of SWIFTNet user connectivity components

13th November 2018

SWIFT infrastructure components and technical considerations - overview

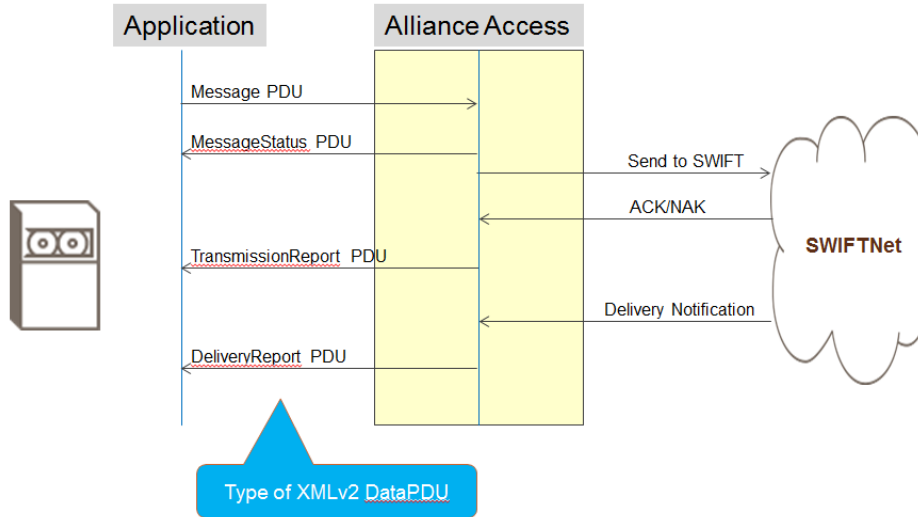


For SAA:

- XMLv2 wrapper



XMLv2 protocol



- Location of the XML v2 schema can be found in SAA system under this folder /MXS/xsd/SAA_XML_v2.xsd
- Sample message also available in Windows (FIN and InterAct): %ALLIANCE%\MXS\batch_examples\Samples_v2_rev1.zip
- In UNIX (FIN and InterAct): \$ALLIANCE/MXS/batch_examples/Samples_v2_rev1.tar.Z
- For more details, please refer to Developer Toolkit for Alliance Access 7.x.x > (Developer Guide)

Integration and transformation requirements

For AMH:

- Full InterAct message
- ISO 20022, XML, AMP and other proprietary message format with message transformation is also possible.

How to configure AMH to connect to InterAct services?

> FileAct/InterAct Connectivity Guide – Alliance Messaging Hub 3.x.x

For other messaging interfaces:

- Please check with your SWIFT interface provider or in-house developers for InterAct integration requirements.

Where to find the list of SWIFT Certified Interfaces on www.swift.com?

<https://www.swift.com/about-us/partner-programme/swift-certified-interface-programme/document-centre>



Distinguishing pilot and live traffic

- Customers must clearly distinguish traffic as being pilot or live, by using the correct naming conventions that allow to differentiate between them. This applies to concepts like service names, queue names, input channel names, and output channel names. Typically, these end in "**!p**" for pilot traffic, while for live traffic there is **no** "**!**" at the end of the name.
- e.g. Service Name: swift.generic.ia!p for pilot (Test and Training)

Note : the service names (pilot and live) for CHES services will be confirmed by ASX.

Subscription to messaging services

- Customers must subscribe to the appropriate messaging services through the SWIFT service e-ordering website:

<https://www.swift.com/myswift/ordering/order-products-services/market-infrastructure>

- Only SWIFT users can use messaging services in the production environment for pilot (Test and Training) or live operations.

Note: the service subscription availability for CHES pilot service will be confirmed by ASX.



ISO 20022 XML Schema for CHESS (E.g. Message Standards Deployment Package for Alliance Access)

Deployment package (also called MX Message Standard) is specific to Alliance Access and Alliance Webplatform software. Its purpose is to enable:

	Alliance Access	Alliance Webplatform	Alliance Messaging Hub
If MX Message Standard is available (DP has been installed)	<ul style="list-style-type: none"> - MP = "MX" format - Keyword extraction - "well-formed XML" validation 	<ul style="list-style-type: none"> - "structured" display - Creation/modification of MX messages - Use of MX template - XML schema validation 	<ul style="list-style-type: none"> - DP not required - XML schema
If MX Message Standard is NOT available (DP not installed)	<ul style="list-style-type: none"> - MP = "AnyXML" format - "well-formed XML" validation 	<ul style="list-style-type: none"> - "fast mode" display (as plain text) - creation of new messages not possible (only modification of existing messages) - No XML schema validation - "well-formed" XML validation 	



www.swift.com

Transport of ISO 20022 Business Message

Transport of ISO 20022 Business Message

BAH and Document within InterAct Header <Payload>

2-layer model for transport header and ISO 20022 Business Message

> **Business Message consists of:**

- Business Application Header (BAH) and
- choice of ISO Document schema

> **InterAct header <payload> encapsulates BAH xml and Document xml**

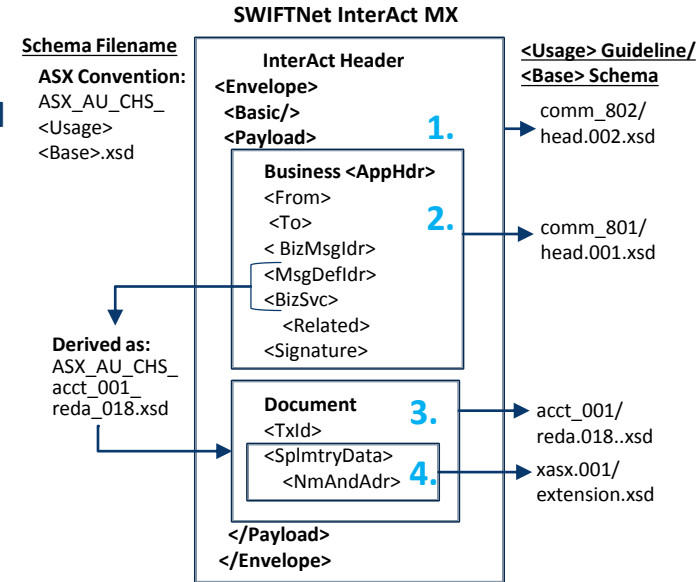
- Business Application Header
 - Mandatory for securities domain.
 - Not used in ISO 20022 payments including NPP
 - Choice of Party Identifier format in <To> and <From>. SWIFT BIC or ASX UIC. Independent of DN level 2 BIC.

> **Linking BAH and Document**

- Document schema filename derived from BAH element values e.g. & <BizSvc>acct_001 & <MsgDefIdr>reda.018 (ignoring version)

CDE Drop1 set-up

- > Only ASX Party Identifier initially. Connected SWIFT BIC must be used in InterAct DN's
- > BAH/ISO Signature mandatory with calculation to be introduced in later CDE drop.
 - Detailed in 1st tranche of technical documentation



SWIFTNet Input to CHES Replacement

- acct_001: Securities Account Creation Request

1. InterAct Header

```
<Envelope>
  <Basic>
    <TransactionRef>TINA201807200654102813</TransactionRef>
    <SwiftRef>swi00003-2018-07-20T06:54:10.14874.137554Z</SwiftRef>
    <Requestor>ou=corpact,o=xasxau2s,o=swift</Requestor>
    <Responder>cn=emc,ou=na,o=abcdau3x,o=swift</Responder>
    <Service>xasx.ca.sflp</Service>
    <Msgld>20dd2b9c-769d-4c86-9f15-aa25f0a9faef</Msgld>
    <RequestRef/>
    <RequestType>seev.031.002.04</RequestType>
    <PdIndication>FALSE</PdIndication>
  </Basic>
</Envelope>
<Payload>
  <AppHdr>
    ...
  </AppHdr>
  <Document>
    ...
  </Document>
</Payload>
```

Party Identifier to-be choice of UIC and BIC

2.

3.

2. AppHdr

```
<AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
  xmlns:n1="http://www.w3.org/2000/09/xmldsig#"
  xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.001.001.01
  ASX_AU_CHS_comm_801_001_01_head_001_001_01.xsd">
  <Fr>
    <Orgld><Id><Orgld><Othr>
      <Id>01403</Id>
    </Othr></Orgld></Id></Orgld>
  </Fr>
  <To>
    <Orgld><Id><Orgld><Othr>
      <Id>00001</Id>
    </Othr></Orgld></Id></Orgld>
  </To>
  <BizMsgldr>01403|AccountOCF533405|00</BizMsgldr>
  <MsgDefldr>DRAFT6reda.018.001.01</MsgDefldr>
  <BizSvc>acct_001_001_02_lp</BizSvc>
  <CreDt>2018-10-26T11-10-27.223Z</CreDt>
  <Sgntr>
    <n1:auto-generated_for_wildcard/>
  </Sgntr>
</AppHdr>
```

ISO Signature to-be calculated for Business Message

3. Document

```
<Document xmlns="urn:eurosystem:xsd:DRAFT6reda.018.001.01"
  xsi:schemaLocation="urn:eurosystem:xsd:DRAFT6reda.018.001.01
  ASX_AU_CHS_acct_001_001_02_reda_018_001_01.xsd">
  <SctiesAcctCreReq>
    <Msgld>
      <Id>00005|AccountOCF533405|00</Id>
    </Msgld>
    <SctiesAcct>
      <AcctOwnr>
        <RltdPtyld>XASXAU2S</RltdPtyld>
        <RspnsblPtyld>XASXAU2S</RspnsblPtyld>
      </AcctOwnr>
      <Id>NONREF</Id>
      <Tp>CSDP</Tp>...
    </SctiesAcct>
    <SplmtryData>
      <sup:Document
        xmlns:sup="urn:asx:xsd:asx.001.001.02"
        xsi:schemaLocation="urn:asx:xsd:asx.001.001.02|
        ASX_AU_CHS_acct_001_001_02_reda_018_001_01_sup.xsd">
          <sup:NmAndAdr>
            <sup:Nm>Bayer Ltd</sup:Nm>
            <sup:Adr>
              <sup:AdrLine>51368 Leverkusen</sup:AdrLine>
              <sup:PstCd>700898</sup:PstCd>
              <sup:TwnNm>Berlin</sup:TwnNm>
              <sup:CtrySubDvsn>Berlin</sup:CtrySubDvsn>
              <sup:Ctry>DE</sup:Ctry>
            </sup:Adr></sup:NmAndAdr>...
          </sup:Document>
        </sup:Document>
      </SplmtryData>
    </SctiesAcctCreReq>
  </Document>
```

4. SupData

SWIFTNet connectivity to Customer Development Environment (CDE)

SWIFTNet ISO 20022 messaging

CDE using !pilot Closed User Group (CUG)

InterAct header <Basic> parameters

- > <Requestor> (Sender) and <Responder> (Receiver) using Distinguished Names
 - Minimum 2 levels
 - 3rd recommend to distinguish from ASX CorpAction service
 - Level 2 organisation=BIC
 - Level 3 org.unit for “CHES Replacement” <servicename>
 - ASX DN “ou=<servicename>, o=xasxau2s, o=swift”
 - Party DN “ou=<servicename>, o=<yourBIC>, o=swift”
 - Signing, Authorising DNs To be confirmed
 - Further levels as required for internal routing by Receiver
- > Technical <Service> e.g. xasx.ca.sf!p (for ASX CorpAction service)

```
<Envelope>
  <Basic>
    <TransactionRef>TINA201807200654102813</TransactionRef>
    <SwiftRef>swi00003-2018-07-20T06:54:10.14874.137554Z</SwiftRef>
    <Requestor>ou=corpact,o=xasxau2s,o=swift</Requestor>
    <Responder>cn=emc.ou=na.o=abcdau3x.o=swift</Responder>
    <Service>xasx.ca.sf!p</Service>
    <MsgId>20dd2b9c-769d-4c86-9f15-aa25f0a9faef</MsgId>
    <RequestRef>
    <RequestType>seev.031.002.04</RequestType>
    <PdIndication>FALSE</PdIndication>
  </Basic>
</Envelope>
<Payload>
  <AppHdr>
    ...
  </AppHdr>
  <Document>
    ...
  </Document>
</Payload>
```

SWIFTNet ISO 2002 messaging CDE using !pilot Closed User Group (CUG)

SWIFT member connectivity

- > ‘Hub and spoke’ messaging between Party & ASX as Market Infrastructure
 - No direct messaging between parties

CDE testing in !pilot Closed User Group.

- > ‘Test & Training’ production service
 - segregated from ‘Live’ production by !p <Service>
 - Live or Test BIC used as part of Distinguished Name
 - Must be Institution BIC (8). Not Branch BIC (11) format.
- > **CUG subscription by request via swift.com from Q1, ‘19.**
- > **Store & Forward Parameters**

- SWIFTNet Queue Name <YourBIC>_<Service>_sf_!p
- List of Requestor and Responder DNs ASX DN, Party DN
- Request Type [allows future messages] * (wildcard)

Indirect Vendor connectivity

- > **Only SWIFT members allowed !pilot CUG connectivity**
- > **Vendor SWIFTNet testing requires:**
 - collaboration with SWIFT members and use of their SWIFTNet infrastructure

Subscribe to a Market Infrastructure

A Market Infrastructure is a system administered by a public organisation or other public or a private and regulated association or entity, that provides services for trading, clearing and settlement, matching of financial transactions, and depository functions.

ASX OPERATIONS PTY LTD (BIC : XASXAU2S)	
ASX ReferencePoint Corporate Actions (Live)	Subscribe
ASX ReferencePoint Corporate Actions (Test)	Subscribe

ASX !p Service & CUG parameters

Service Level parameters	Value TBC
Business Service Name	ASX ... (Test)
Technical Service Name	xasx.chs.sf!p
Operating Environment	Pilot user
Billing Model	Under review
Role-based access control	No
Request Level parameters	Value TBC
Request Name	* (wildcard)
Messaging Service	InterAct
Mode	Store & Fwd
Non-repudiation	Yes, Mandatory
Direction	Admin ↔ Party

SWIFTNet ISO 20022 messaging (cont.)

!pilot CUG message integration

MX Message Validation

> Gateway and Network validation

- Basic gateway validation. Parameters including Responder addressing.
 - Guideline schemas can be exported and deployed to gateway validation (earlier nack)
 - Frequent packages requires co-ordination and forced upgrade to any later version
 - e.g. ASX's gateway using base schemas given external workflow and application validation
- Network validation against Standards Release 2018 base schemas. n/a for candidate ISO 200022 messages
- Delivery Status: Waiting, Network Ack/Nack, ASX not requesting Delivery Notifications

Message Responses

> Application validation of ISO 20022 xml

- against Guideline schema (Technical nack: comm_807)
- and business rule validations (Business nack: comm_808)

MX/ISO Transformation

> Lookup of BAH<From> and <To> Party Id to DN for <Requester> and <Responder>

Reminder: For Drop1 ... only "UIC" Party Identifier format supported in Business Message

Future CDE drop ... both BIC and UIC formats supported for Party Id and Counterparty Id

SWIFTNet ISO 20022 messaging (cont.)

Client Application calculation and transformation

- > **Mandatory ISO signature for all ISO 20022 messaging channels**
 - For SWIFTNet, ISO Signature in addition to SWIFTNet transport signature
 - Separate ISO Public Key and certificates
- > **ISO signature method to-be advised in 1st Technical Documentation**
 - ISO signature calculated by <From> Party, verified by <To> Party – recommended
 - Not calculated for CDE Drop1, attribute to satisfy mandatory element.
- > **Counterparty Identifier lookup from “Counterparty Directory” containing UIC and any BIC values**
- > **ISO message definitions include message pagination when SWIFTNet maximum message size exceeded**
 - ASX will review overflow requirements and advise if there are any scenarios when applicable
 - Would require handling of multiple business messages with page no. and last page indicator for a single logical message



Security

- Multi-factor authentication
- Hardware Security Modules
- Non-repudiation



Reuse

- Reuse of SWIFT infrastructure
- Leverage of existing application integration
- Interoperable between FIN/MT and InterAct/MX messages



Messages

- ISO 20022 XML format
- Signed by sender to guarantee authenticity and auditability



Reliability

- Guaranteed Delivery
- SWIFT-defined acknowledgement protocol
- Gateway and Network Validation



Performance

- Scalable range of connectivity components
- Monitoring and workflow tools available



Availability

- High availability
- Resilience
- Virtual Private Network
- Leased Lines

Complementary tools and resources

Complementary tools and resources

Testing without CDE connectivity

Example Connectivity Readiness guide

- > ASX's Intraday Corporate Action STP also using ISO 20022 messages and !pilot Closed User Group
- > <https://www.asx.com.au/services/settlement/asx-settlement/corporate-actions-stp.htm>

SWIFT MyStandard Readiness Portal

- > Online tool for validation of CHES Replacement xml files
Meaningful explanations, links to MyStandards Usage Guidelines

• Schema validation using xml tools

- > xml schemas released with Technical documentation
- > .xsd exported from MyStandards. Also guideline .xls, sample .xml
- > Manually parse sample .xml against xsd to confirm technically valid
- > Create xml files in xml editor tool for test scenarios

MyStandards Readiness Portal

A discovery-based approach to understanding specific formats

1. Discover format issues

2. Easy to fix and re-test

A discovery-based approach to understanding specific formats

3. Direct link to Documentation

4. Contextual questions to support

Documentation is second line of support

One click: I don't understand this error when I test this file against this guideline.

ASX

Source: ISO 20022 Technical Committee 31/7/2018 at <https://www.asx.com.au/services/iso20022-technical-committee.htm>

Timeline for CDE connectivity

Timeline for SWIFTNet CDE connectivity

!pilot CUG subscription & collaboration

CDE available from April '19

- > 1st Technical documentation in Dec '18
- > SWIFT provisioning !pilot CUG in Q1, 2019. ASX as administrator. SWIFT members as subscribers.
- > Process for nominating CDE connectivity including !pilot CUG parameters

Points for consideration

- > SWIFT Members
 - Identify BIC, Party Id, and Distinguished Name for CDE connectivity
 - Order !pilot CUG subscription on SWIFT.com & advise ASX. Allow 3-4 weeks for set-up.
 - Configure test SWIFTNet infrastructure for CDE connection
 - Confirm deliverability of test MX business messages from SWIFTNet infrastructure and Client Application
 - Plan for remediate &/or enhance SWIFTNet infrastructure
- > Vendors & SWIFT Members
 - Identify partners for collaborative CDE testing
 - Develop ISO 20022 business messages for Drop1 functional testing

Questions?

Thank you

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BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 2B	
Topic	Corporate Actions STP Phase 2 project
Date	29 November 2018
Purpose of this paper	To provide Business Committee members with an update on progress of the Corporate Actions STP Phase 2 project.

OVERVIEW

ASX detailed work on the project commenced in Q3 2018, with expected delivery in two phases, the first in mid-2019, and the second and final phase in Q2 2020.

To date, ASX's work has been focused on the following activities:

- Bringing together the project team members, which includes resources from external vendors and contractors
- Reviewing and setting up all technical environments needed for the project, including development and test. The project has determined that the current technical solution remains fit for purpose, however there are some system upgrades required.
- Starting work on detailed requirements and development using an agile approach. ASX documented the high level requirements for the project earlier this year, and the team is now breaking this down into detailed work with associated analysis.

The immediate detailed work is currently prioritised in the following order, with some of this work progressing in parallel:

- Phase 1 event updates:
 - Update ISO 20022 usage guidelines for the Phase 1 events. For example, adopt the latest version of ISO 20022 base message, and any identified data changes;
 - Enhancements to online forms and data capture identified by ASX and via feedback from the community.
- Phase 2 events:
 - Investigative work on event features and processes;
 - Forming basic first draft ISO 20022 usage guidelines for each event type – this front runs some work required for the CHES Replacement project;
 - Detailed requirements and drafting of event pro formas;
 - Initial focus is on an issuer's notification of capital raising or capital change events (currently announced via Appendix 3B to the Listing Rules or unstructured PDFs), including entitlement and other offers.

Stakeholder engagement

The first meeting of the Corporate Actions STP Phase 2 industry working group was held on 15 October 2018, with industry expert members representing organisations involved in the end to end perspectives of a corporate action notification – including issuer associations, share registries, clearing and settlement participants, AMOs and information vendors.

The group has a clearly stated and agreed purpose where members are invited to provide input to achieve a best practice, efficient and standard compliant straight through process for corporate action information; from the issuer to consumers of the information. ASX and members will ensure that the implementation will focus on achieving the identified benefits of the project.

ASX will also be working with issuer associations to identify individual issuer representatives to join the group and also to participate in testing.

At the first meeting the group was provided with an introductory overview of the project with key topics including:

- Objectives of the group, purpose, activities
- Project objectives, benefits
- Project scope, timeline
- Project solution
- ASX's way of working, work to date
- Engagement and communication
- Next steps

ASX also flagged to members that ASX was currently preparing a public consultation document including a number of Listing Rules changes that does include some changes to support part of the Corporate Actions STP Phase 2 scope. Alongside this, ASX noted it was also working on enhancements to the web portal used by issuers to lodge company announcements amongst other things. This is the same portal used by issuers to submit online forms.

It is expected the working group will meet every 1 to 2 months, depending on the project schedule. The next meeting will focus on specific enhancements ASX has documented for the Phase 1 events – for noting, and for discussion and agreement of key questions that ASX considers requires external input.

ASX also continues to validate its approach to the corporate action STP solution with global working groups and other markets.

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 2C	
Topic	Report on the Sydney meeting of the Securities Market Practice Group
Date	29 November 2018
Purpose of this paper	To provide Business Committee members with an overview of the APAC and Global Securities Market Practice Group meetings

OVERVIEW

During the week of 15 October 2018 (the week prior to Sibos), ASX was privileged to host the physical meetings of the APAC Securities Market Practice Group (SMPG) for one day, and the Global SMPG for 3 days, alongside event co-sponsors Citi, DTCC, HSBC, NAB and SWIFT.

Given the global membership of these groups, who normally meet by conference call monthly, the physical meetings are aligned with likely travel to the Sibos location each year, and usually hosted by a local market infrastructure.

Over 45 representatives from 30 organisations and 19 countries gathered, with attendance also made available to representatives of the Australian SMPG.

ASX will provide committee members with an overview of the key agenda items and discussion points from these meetings.

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 2D	
Topic	ISO 20022 Technical Committee Report and Minutes
Date	29 November 2018
Purpose of this paper	To provide Business Committee members with a copy of the report and minutes from recent meetings of the ISO 20022 Technical Committee.

OVERVIEW

The ISO 20022 Technical Committee met on 4 September, 9 October and 27 November 2018. A copy of the Technical Committee's report and minutes for the first two of those meetings are attached.

A verbal update on the third meeting will be provided at the meeting.

The Forward Work Plan for the ISO 20022 Technical Committee is provided in Attachment D.

ATTACHMENTS

Attachment A – ISO 20022 Technical Committee Reports – 4 September and 9 October meetings

Attachment B - ISO 20022 Technical Committee Minutes – 4 September meeting

Attachment C - ISO 20022 Technical Committee Minutes – 9 October meeting



ISO 2022 Technical Committee Report to the Business Committee

This report provides an overview of two ISO 2022 Technical Committee meetings held on 4 September and 9 October 2018, and a summary of the agenda for the 27 November 2018 meeting.

ISO 2022 TECHNICAL COMMITTEE MEETING 4 SEPTEMBER 2018

The Technical Committee met on 4 September 2018 in Sydney.

MEETING AGENDA (NON STANDARD ITEMS)

Business and Technical Matters For Consideration:

- Security holding locks
- Unilateral and bilateral demand transfer
- Usage Guideline Annotation Standard
- Review feedback on questions for EIS 164/sett_101, next steps
- Review of 'to-be' messages ready to be published

KEY ISSUES DISCUSSED

- The Chair noted that of eight open action items, six actions remained open, one had been closed, and one action item remained on hold.
- The committee members were provided with an update on the CHES Replacement project, focused on ASX's response to consultation feedback document published that morning. Members had questions around connectivity costs, whether ASX would publish non-confidential responses, and the Connectivity and Integration working group.
- As part of the ISO 2022 project update, ASX noted that it had received follow up questions from the Technical Support Group (TSG) regarding the change request ASX had submitted to the ISO 2022 registration authority for the Business Application Header (BAH) to include Business Date. There were positive indications the request would be accepted. ASX noted it was also finalising the submission of a Business Justification to the ISO 2022 registration authority to reserve a number of business areas for new message development – including some tax reporting, net cash obligation messages and others.
- ASX provided an update on work progressed on ISO 2022 messages to support security holding locks with some consolidation compared to existing EIS equivalent messages. Members had a number of questions about whether the functionality would address locking scenarios that may be currently



actioned in participant's own systems rather than CHES, and ASX committed to review coverage of possible scenarios for locking in the requirements. The topic generated a number of discussion points including scheduling, and the process for housekeeping of unmatched messages and how this could be standardised (e.g. timeframe) in the future.

- ASX provided an overview of the ISO 20022 message set defined for Unilateral and Bilateral Demand Transfer, again noting some consolidation of messages compared to current EIS and use of common messages for invalid or rejected transaction notifications.
- ASX provided an overview of how annotations would be presented in the 'to-be' usage guidelines, compared to the 'as-is' guidelines, and how particular new requirements would be called out.
- Feedback on questions posed to the committee by ASX regarding EIS 164/sett_101 message was received from 7 committee members. ASX played back this feedback, along with ASX's recommended course of action specific to each of the three questions (two changes to go ahead due to consistent feedback, one instance of no change due to mixed feedback). The Chair provided committee members an additional two weeks to review ASX's recommendations.
- ASX provided an overview of the next set of draft messages for member review, including the unilateral and bilateral demand transfer collection of messages, intra-position movement confirmation and three republished messages following corrections advised by members. Member feedback was sought by 25 September, prior to the next meeting.
- The Chair noted that the next meeting of the committee was scheduled for 9 October in Melbourne.

AGREED ACTIONS

Four additional action items were raised at the meeting, with a total of eleven outstanding action items noted. The action items are detailed in full in the Minutes from the meeting. Minutes from the meeting are attached.

ISO 20022 TECHNICAL COMMITTEE MEETING 9 OCTOBER 2018

The Technical Committee met on 9 October 2018 in Melbourne. Noting the meeting was re-run on 30 October 2018 in Sydney due to audio issues experienced on 9 October 2018.

MEETING AGENDA (NON STANDARD ITEMS)

- MyStandards Community – 'to-be' usage guideline feedback
- Party's own and Counterparty identification: UIC and BIC
- Unilateral and Bilateral settlement instructions
- Common messages
- Review of 'to-be' messages ready to be published

KEY ISSUES DISCUSSED

- The Chair noted that of eleven open action items, four actions remained open, six had been closed, and one action item remained on hold.



- The committee members were provided with an update on the CHES Replacement project, focused on ASX's delivery of key project milestones. These included ASX tracking to delivery of 1st tranche of Technical Documentation in December 2018, and the Customer Development Environment in April 2019. ASX was also ready to kick off the Connectivity and Integration working group and the Focus Group discussions. A schedule of the various engagement activities was also now published on the CHES Replacement web page.
- As discussed at the September Business Committee, ASX noted that it was cognisant of participants requests for pricing information for the CHES Replacement system. ASX confirmed there would be no access costs for the test and development environments, but heard from participants that they need information regarding cost of accessing the replacement system from a production perspective. ASX was working as fast as possible to produce connectivity pricing information.
- As part of the ISO 20022 project update, ASX noted that it had received further positive indications regarding the change request ASX had submitted to the ISO 20022 registration authority for the Business Application Header (BAH) to include Business Date. In September ASX had also submitted a Business Justification to the ISO 20022 registration authority to reserve a number of business areas for new message development – including some tax reporting, net cash obligation messages and others. The changes that ASX had proposed to a number of T2S draft new messages that would be used for CHES Replacement had also been accepted in final versions.
- ASX outlined its approach to the identification of parties in the messages, allowing parties to specify preferences to receive party identification in either UIC or BIC (if available). No objections were raised by members.
- During the September, October and November meetings ASX has provided an overview of key settlement processes and messages. ASX provided an overview of the processes and associated 'to-be' ISO 20022 messages for unilateral and bilateral settlement. This included the proposed consolidation of a number of like existing CHES messages. ASX also provided details of new functionality in the form of new business requirements including linking bilateral settlements to ensure delivery of the correct units during settlement; enhanced bilateral transaction matching to allow participants to override the ASX prescribed tolerance levels, and to improve client protection by allowing participants to reserve units in their direct and sponsored HINs for the fulfilment of a specific scheduled settlement instruction (referred to as 'settlement locks'). Members did raise questions around some aspects, including the level of message consolidation and whether it went far enough.
- 14 additional 'to-be' ISO 20022 messages related to unilateral and bilateral settlement and common messages were shared with members for their review.

AGREED ACTIONS

Four additional action items were raised at the meeting, with a total of nine outstanding action item noted. The action items are detailed in full in the Minutes from the meeting. Minutes from the meeting are attached.



ISO 20022 TECHNICAL COMMITTEE MEETING 27 NOVEMBER 2018

The Technical Committee will meet on 27 November in Sydney. A report and minutes from the 27 November meeting will be provided at the next Business Committee meeting.

MEETING AGENDA (NON STANDARD ITEMS)

- MyStandards Community – ‘to-be’ usage guideline feedback
- Re-cap on principles of adoption
- Bilateral Demand Settlement instructions
- Focus Group meeting outcomes
- Review of ‘to-be’ messages ready to be published
- Forward plan for 2019



MINUTES OF THE ISO 20022 TECHNICAL COMMITTEE

Tuesday 4 September 2018
ASX offices, Sydney; Webinar

-
1. **Welcome, Agenda**

 2. **Minutes from last meeting, open actions**

 3. **CHESS Replacement project update by ASX**

 4. **ISO 20022 project update by ASX**

 5. **Update from Business Committee**

 6. **Matters for Consideration (Business and Technical Matters)**
 - a) Security holding locks
 - b) Unilateral and Bilateral demand transfer
 - c) Usage Guideline Annotation Standard
 - d) Review feedback on questions for EIS 164/sett_101, next steps
 - e) Review of 'to-be' messages ready to be published

 7. **Next Meeting** - 9 October 2018 – Melbourne, webinar



Technical Committee Members

Company	Name	Job Title	Apologies
Australian Payments Network Limited	Andy White	Chief Operating Officer	Apology
Australian Payments Network Limited	Paul Creswick	Security Standards Manager	
Bank of America Merrill Lynch	Andree Hindmarsh	Head of GMOT Australia	
Bank of America Merrill Lynch	Jimmie Alam		
Bell Potter Securities	Dean Surkitt	Managing Director Retail	
BNP Paribas Securities	Penelope Stafford	Manager, Settlements	
BNP Paribas Securities	Wayne Murphy	Project Manager	
Boardroom Limited	Tony Robinson	Senior Software Engineer	
Boardroom Limited	Michael Mullins	CIO	
Broadridge (Australia)	Manoj Mathew	Business Analyst	
Broadridge (Australia)	Mabel Chow	Development and Support Manager	
Broadridge (Australia)	Tomas Kliman	Senior Project Manager	
Broadridge (Australia)	James Marsden	APAC Business Development & Strategy	
Broadridge (Australia)	Andy King	Product Specialist	
Broadridge (Australia)	Anil Wali	Product Specialist	
Broadridge (Australia)	Alok Ranjan	Technology Specialist	
CBA Equities	Joel Cox	Technical Business Analyst	
CBA Equities	Carolyn Webb	Test Manager	
CBA Equities	Ben Lowe	Manager Settlements	
Chi-X Australia	Mike Aikins	Head of Solution Development	
Chi-X Australia	Suketu Adhvaryu	Senior Solution Architect	
Citicorp	Miles O'Connor	Director, Direct Custody & Clearing Securities Markets & Securities Services	
Citicorp	Andrew Gibson	Director – Head of Direct Custody and Clearing Australia & NZ	
Citicorp	Brett Dennis	Head of Operations – Party Clearing	
Citicorp	Lyall Herron		
Citicorp	Janice O'Brien	Markets & Securities Services Technology	
Citicorp	Matthew Warner		
Citicorp	Ashok Kumar Balusa		



Company	Name	Job Title	Apologies
Citicorp	Glenn Pahilan		
Citicorp	Stephen Rylands	Product Manager	
CMC Markets Stockbroking	Nikola Vanstan	Change Manager	
Computershare	Paul Walton	Senior Manager, Corporate Actions & New Business Development – Investor Services	
Computershare	Leanne Bailey	Senior Business Analyst Product & Innovation	
Computershare	Laik Tan		
Deutsche Securities	Kevin Novini		
Digital Asset	Fil Mackay	Senior Product Architect	
Dion Global Solutions	Craig Gray	Product Manager – Australia and NZ	
Dion Global Solutions	Nikki Gleisner	Account Manager	
GBST	Andrew Murdoch	Product Specialist, GBST Capital Markets	
GBST	Sue Schafer	Product Owner	
Goldman Sachs	Darrel Schwarz	Technology Vice President	
Goldman Sachs	Josh Rice		
Goldman Sachs	Nidhi Luthra		
HSBC Securities Services	Gregory Wilkin	Head of HSBC Operations	
HSBC Securities Services	Salih Kulic	Manager Custody	
HSBC Bank Australia Limited	Michael Macintosh	Senior Client Account Manager, Global Liquidity and Cash Management	
HSBC Bank Australia Limited	Anna Fratini	Senior Product Manager – High Value Payments, Clearing and Financial Institutions,	
HSBC Bank Australia Limited	Phyllis Yeung	Senior Analyst	
HSBC	Herman Wong	Manager, Change Management & Delivery	
HSBC	Edmond Chan	Senior IT Development Manager	
HSBC	Cherrie Xu	Head of IT Securities Service	
HSBC	Asri Asat	Optimisation Manager, Securities Service	



Company	Name	Job Title	Apologies
HSBC	Chang Gao	Business Consultant	
JP Morgan	Ed Lawson	Settlements Manager	
JP Morgan	Danny Ng	Middle and Back office AD Manager	
JP Morgan	Scott Oakland	Direct Custody Product Manager Australia	
JP Morgan	Ned Miglez		
JP Morgan	Daniel Smith	VP, Network Management	
JP Morgan	Lesley Henderson	Technology Product team	
Link Group	Ian Batterham	Business Applications Architect	
Link Market Services	Sue Julian	National Manager, Corporate Actions	
Macquarie Group	Paul Bragg	Senior Manager Equities Clearing ANZ	
Macquarie Group	Merrilyn Auton	Manager Operations	
Morgans Financial	Matt Neubauer	Team Leader, Service Management Team	
Morgans Financial	Ed Strike	IT Manager	
Morgan Stanley	Dorothy Wilson	Executive Director, Morgan Stanley Wealth Management, ISG Technology	
Morgan Stanley	Kirsty Venters	VP, Prime Brkrng Funding & Fin Tech	Apology
Morgan Stanley	Oscar Dela Cruz		
Morgan Stanley	Andrew Fielder		
Morgan Stanley	Gordon Davies	VP/Firmwide Ops	
Morgan Stanley	Andrew Sime		
NAB Asset Management	Suresh Chinnappa	Head of Custody Service Operations	
National Australia Bank	Sachin Patel	Senior Analyst, Regulatory Affairs	Apology
National Stock Exchange	Lina Lim	Head of Technology	
Nomura Research Institute	John Ryan	Senior Consultant	
Nomura Research Institute	Ashish Jha		
Northern Trust	Yen Pan Chung	Senior BA, Market Advocacy and Innovation Research	
Securitease	Anton Smith	Director	
Securitease	Chris Werry	Business Analyst	
Securitease	Angela Losurdo	Business Systems Analyst	
Share Investing	Phil Barnes	Senior Manager, Platforms	
SWIFT Standards	Nicole Jolliffe	Senior APAC Standards consultant	



Company	Name	Job Title	Apologies
Sydney Stock Exchange	Jason Shen	Market Operations Officer	
UBS	Phillip Drury	Phillip Drury, Executive Director, Equities IT	
UBS	Duncan Earl	Executive Director, Head of Change, UBS Group Operations	
UBS	Neil Martin	IT – Project Management	
Wealthhub Securities	James Channon	Manager, Capital Markets Trading	

ASX Management

Name	Job Title	Apologies
Tim Hogben	Chief Operating Officer (Chair of the Technical Committee)	
Cliff Richards	Executive General Manager, Equity Post Trade Services	
Brendon Luscombe	General Manager, Product Owner, CHES Replacement Project	Apology
Karen Webb	Senior Manager, Equity Post Trade Services	
Russell Eyre	Enterprise Architect	
Anne-Marie Fisher-Taylor	Project Subject Specialist	
Darcy Wright	Senior Business Analyst, Equity Post Trade	
Priscilla Ferri de Barros	Senior Business Analyst, Equity Post Trade	
Nicky Darwin	Senior Business Analyst, Equity Post Trade	
Sachin Zope	Business Analyst, Equity Post Trade	
Gary Hobourn	Senior Economic Analyst, Regulatory and Public Policy	Apology
Fraser Moodie	Manager, Integration and Connectivity, CHES Replacement	



The meeting commenced at 3.00pm.

Agenda item 1: Agenda overview

The Chair welcomed Technical Committee members to the meeting including members attending by webinar.

The Chair outlined the Agenda for the meeting, referring to the presentation slides prepared by ASX, including the forward agenda overview provided on ASX presentation slide number 5. Members were requested to review the forward agenda and suggest any additional topics of interest. The plan for 2019 was not yet available, but was under consideration by ASX.

Agenda item 2: Minutes from last meeting, open actions

The Chair noted that the minutes from the last meeting held on 31 July 2018 had been finalised and no comments had been received from members. The minutes had been distributed and published on the web page.

The Chair noted the outstanding actions from the last meeting as outlined on slide number 6 and 7 of the ASX presentation.

Action item 20 was for ASX to provide a proposed plan for the remaining training webinars. The Chair noted that ASX was considering when the delivery of industry training would be appropriate during ASX's progression of the 'to-be' state, and particularly was for consideration alongside other working group activities and documentation information. **This item remains on hold.**

Action item 51 was for ASX to consider how impacted stakeholders could be engaged on the standards for registration details prior to the next meeting. The Chair noted the relationship between this action and Action item 59. ASX had met with two share registries on 3 September to discuss their findings on registration details that had included analysis across ~20 million accounts. The discussion provided good input for ASX's preparation of the topic for further discussion at the proposed registration details focus group. Any decision regarding standards for registration details will be provided to the Technical Committee for transparency. **This item remains open.**

Action item 53 was for members to answer four questions if they are considering using a BIC as their party identification: whether they would use a new or existing BIC, whether the BIC was connected or non-connected, whether it was a BIC8 or BIC11, and if that BIC would apply to all activity for that organisation or actor, or for single or multiple activities. Members were requested to provide examples, if possible. The Chair noted that ASX had not received many responses to date, and requested that other participants share this information with ASX as soon as possible. ASX would like to resolve these questions with immediacy as it was impacting important design decisions. **This item remains open.**

Action item 55 was for ASX to confirm where change requests for Service Release 2019 would be visible. The Chair confirmed that ASX had sent this information by email to members earlier that day. If members had any remaining questions, they could contact ASX. **This item was closed.**

Action item 56 was for ASX to provide members with more information on the Corporate Actions STP Phase 2 project. The Chair noted that this hadn't been done yet, and would be advised separately. A



member asked if work had commenced. The ASX Senior Manager confirmed that work internal to ASX had commenced, but external engagement had not yet commenced. **This item remains open.**

Action item 57 was for members to review the consideration by ASX to provide a complete set of settlement obligations (net broker, gross broker). Referring to ASX presentation slide number 8 the ASX Project Product Specialist provided a re-cap on this consideration, where the idea was to give a complete set of messages. ASX had received feedback from two members that were supportive of the proposal. An additional suggestion had been received to include a single aggregated exchange market trade. No other comments were received from members. The Chair noted that ASX would welcome any additional feedback from members and confirmed that ASX will further analyse this topic and come back to the Technical Committee at a later time. **This item remains open.**

Action item 58 was for ASX to publish proposed “to-be” messages for updates to accounts – reda_023, reda_020, reda_021 for member review. The Chair confirmed that ASX would carry this action over to October as the messages weren’t ready yet for publication. **This item remains open.**

Action item 59 was for share registries to share findings from study of registration details. Refer comments against Action item 51. **This item remains open.**

The Chair noted that ASX had received a suggestion from one member to provide a consolidated list of all actions and outcomes. ASX supported this and would prepare a (living) document to be published on the CHES Replacement web page. **(Matters Arising 1 – Action item 60)**

Agenda item 3: CHES Replacement project update by ASX

The Chair invited the Executive General Manager, Equity Post Trade Services to provide an update on the project.

The Executive General Manager noted that ASX had published that morning the Response Paper to the consultation on CHES Replacement business requirements. 41 responses had been received from a broad cross section of the industry, with an overall supportive sentiment and strong interest in understanding the benefits of the DLT solution. Feedback had been received on the new features, the timeline and connectivity options. The Executive General Manager noted that a number of responses provided differences in priorities for new features compared to prior surveys. Key questions were also asked about the proposed timeline, given the scope of operational, technical and regulatory work that may be required for some of the new features.

The paper provides a summary of ASX’s response to the feedback with an adjustment to the proposed delivery date to March or April 2021, with final confirmation closer to the date. The scope had also been reviewed, with 7 features moved back to post Day 1, and 1 feature moved into Day 1. This would reduce the Day 1 delivery payload to the market. It was suggested that members read the Executive Summary which provided a good overview of the detail in the document. The Executive General Manager thanked those members that had provided a response and also the ASX team for its detailed review and analysis work.

The Executive General Manager did highlight an omission on page 22 of the paper that would be corrected as soon as possible where SWIFTNet had not been included as a channel option.



ASX would now focus on starting the Connectivity and Integration working group meetings, and also topic by topic discussions with focus groups.

A member noted they had reviewed the response paper and had not found a clear analysis of the connectivity costs (e.g. taking a node, interacting with a node), and hoped those topics would have been addressed. The Executive General Manager confirmed there would be no costs to participants in the pre go live environments. The paper had provided a timeframe for connectivity costs to be provided by ASX – prior to the CDE environments being available to customers around April 2019.

A member asked if the consultation responses would be made available by ASX. The Executive General Manager noted that a number of the responses were confidential, and that ASX would not publish the non-confidential responses, but would leave it to those respondents to publish themselves (noting that a number had already).

A member asked when the Connectivity and Integration working group would kick off and if there were any restrictions regarding who could participate. Could participants register or should they wait for an invitation. The Executive General Manager noted that ASX was looking to have an efficient process in place for the working group so may suggest one member from each entity. ASX would be inviting participants, noting there would be opportunities for broader broadcast of general information. ASX was keen to ensure that existing connected parties to CHES were covered.

The Chair noted that the ASX response paper did not answer all the questions raised by respondents, as ASX was still working through some aspects of the project. ASX would continue to engage with the market and provide information as it became available. The Chair also thanked members for the quality of their responses and good consideration of existing and proposed new functionality.

Agenda item 4: ISO 20022 project update by ASX

The ASX Senior Manager provided an update on the ISO 20022 project, noting that members of the ASX ISO team had been working on various topics alongside requirements stream.

The latest topics included security holding lock (for discussion at prior meeting and this meeting), unilateral demand and bilateral demand (for discussion at this meeting), unilateral scheduled and bilateral scheduled (for discussion at the next meeting), payment facilities, continued work on registration details. Work was also continuing on refining the Technical Documentation for release in December. ASX had already received some feedback based on the presentation at the last meeting on this topic, and in today's presentation members would see a refreshed style for the UML diagrams.

ASX continued engagement in global ISO groups, with the latest Securities Evaluation Group (SEG) meeting held Monday 27 August. Focus was currently on maintenance working group reviews of Standards Release 2019 change requests. The meeting also received updates from evaluation teams, including the T2S Evaluation team in which ASX is a participant. The four central banks (4CBs) sponsoring the T2S new messages had submitted revised "admi" business area messages with the ISO registration authority for review. ASX was expecting to see these revised messages in the near future.

With regard to the change request ASX had submitted to ISO 20022 registration authority for the Business Application Header (BAH) to include Business Date, ASX had received follow up queries from the Technical



Support Group (TSG) with positive indications the request would be accepted. The next TSG meeting was planned for 12 September where they were likely to consider a generic date description for this field.

ASX was also in the final states of preparing a Business Justification to be submitted to the ISO 20022 registration authority to reserve a number of business areas for new message development – including some tax reporting, net cash obligation messages and others. The SWIFT standards consultants were assisting with this process which had been accelerated given a number of other markets had expressed interest in the same areas.

The Chair noted that there was a lot of interest in ASX's work on DLT and standards, particularly with the upcoming SIBOS conference. The work was complex and required careful coordination and planning amongst a growing combined team of about 80 ASX and Digital Asset staff.

Agenda item 5: Update from Business Committee

The Chair noted that there had not been a Business Committee meeting since the last Technical Committee meeting. The next meeting was planned for late September, but the agenda had not yet been finalised. ASX expected a lot of interest in response to consultation.

Agenda item 6: Matters for Consideration

a) Security holding locks

The ASX Senior Business Analyst provided an overview of the circumstances in which locks could be made. The current processes (EIS 204 and 206) for partial holding locks was cumbersome requiring coordination between multiple parties. For the 'to-be' messages a new message (hold_205) would be created for a security lock/unlock for notification purposes effectively consolidating the existing EIS 204 and 206 messages. There were a number of advantages for the new approach, where partial holding locks would be placed in sub positions, and a reduction in the coordination between multiple parties, and eliminate the need to create a new HIN. Referring to ASX presentation slide number 15 the Senior Business Analyst provided an overview of key call outs for the new message, and noted that movements couldn't be made from "Available" to "Available" or "Blocked" to "Blocked".

ASX presentation slide number 16 provided a typical process flow. A member asked what would happen if a participant couldn't currently request a lock in CHES. For example a court order where the lock was applied within the participant's own accounting system – would that be considered by ASX as a function for the participant to apply the lock within the system. The Analyst noted the target for this message was for ASX to apply the lock based on message requests to lock.

The Chair asked the member to clarify the scenario – how was it dealt with now – was the lock in the participant's own system rather than CHES. The member noted it would be more appealing if the lock was enabled at the market level. A share registry member asked if the sub-position locking was common across all business areas. The analyst noted ASX had not yet determined detailed requirements for other business areas. The member queried how this would impact share registry records. ASX to ensure coverage of possible scenarios for locking in the requirements, particularly those that are participant driven for certain reasons. **(Matters arising 2 – Action item 61)**



b) Unilateral and Bilateral Demand Transfer

The ASX Senior Business Analyst referred to ASX presentation slide number 17 to provide an overview of the existing 'as-is' EIS messages to the proposed 'to-be' ISO 20022 messages, noting consolidation of some messages and the identification of workflow names via transaction condition codes, for example UDTR for Unilateral Demand Transfer. Referring to ASX presentation slide number 18 the analyst noted the same hold_201 'to-be' message would be used for UDTR and Unilateral Demand Transfer (related participants) (UDRP). A member asked for clarification on the naming convention for the messages. The analyst confirmed that hold_201 was ASX's own name, referring to the business area within the ASX message catalogue (e.g. hold = holding). The ISO 20022 base message was sese.023 and this would also be included in the full message name.

An overview of the process flow was provided on ASX presentation slide number 20.

A member asked if the holding lock on the delivering HIN for the Bilateral Demand Transfer workflow meant that the participant couldn't over sell that holding. ASX confirmed that was the case – it was locked for settlement.

A member asked if this would prevent schedule of Free of Payment settlements on future dates. An ASX representative sought clarification whether this was in regard to EIS 101 or bilateral demand EIS 005, was it real time for same day or tomorrow. The member noted there was a current gap where CHES doesn't allow for schedule of free of payment on a future date. The Chair sought further clarification whether this was a feature sought for both DvP and Free of Payment. The member confirmed that was the case, for outside of batch transactions (e.g. EIS 001, 003, 005). ASX confirmed it will note the comments and consider for requirements.

A member asked what would happen if an EIS 005 equivalent was sent to CHES but there was no holding in the HIN, would CHES wait to match or reject. ASX confirmed it would be rejected immediately.

A share registry member noted they would like to understand the impacts to their issuer's actions as a result of the locks being applied and held in a sub-position. The member noted it was the responsibility of the share registry to action security transformations (currently via EIS 421) which may affect sub positions as it was their role to ensure integrity and visibility to the issuer. The member also noted that if ASX permitted sub positions intraday then the volume of locked holdings would increase.

Referring to ASX presentation slide number 21, the analyst provided an overview of the housekeeping and cancellation process. The locking concept also provided the opportunity to descope the current EIS 024.

A member asked what would happen if the EIS 005 equivalent hadn't been matched – was there an intention for CHES to clean out the messages (i.e. housekeep). ASX confirmed that was the case, during the evening, with an associated release of the lock. A member queried the timing, as current timing for housekeeping was 48 hours and whether that was the standard to carry forward. ASX and participants would need to consider the relative effort of the lock remaining in place for longer, vs earlier housekeeping and re-sending instructions (possibly with increased transaction/message costs).

A member asked if the request could only be sent on the intended settlement day and if it isn't matched (i.e. rejected), another request would be required to proceed.



A member asked if the participant would receive a notification to confirm when an instruction was deleted (housekept). ASX confirmed that was the case.

A member asked whether ASX should consider a standardised period for housekeeping across the message set/business areas. ASX confirmed it will review, vs. the business requirements.

The Chair confirmed that ASX would review the intended timing for housekeeping (e.g. in the Demand Transfer Flow for Demand Transfer Request (unmatched) and Cancellation Request (unmatched)), any standardisation opportunities for the housekeeping period; and whether settlement requests could be future dated. ASX will revert back to the committee with the findings. This action would also consider the visibility of holding locks to issuers on an intra-day basis. **(Matters Arising 3 – Action item 62)**

Referring to ASX presentation slides numbered 22 to 25 the analyst provided an overview of the various message flows and associated transaction ids. The Chair noted it was particularly useful for vendors to have this detailed information. It was logical to ASX, but welcomed any comments or feedback from members.

Referring to ASX presentation slides numbered 27 and 28 the analyst noted that hold_201 (request) and hold_202 were being used for both Unilateral Demand Transfer Request and Bilateral Demand Transfer, the message would need to be populated with both Delivering and Receiving Party information. Where the transaction was unilateral, the same value would be present for both parties.

Referring to ASX presentation slide number 29, the analyst noted that the ISO message had 3 places for safekeeping account (the HIN). The first would be used for both bilateral and unilateral as this element is mandatory in ISO20022 message, ASX had removed the second instance, and the third would be used for unilateral only. This was the same approach as for the 'as-is' mapping completed earlier this year. ASX would provide rules in the usage guideline annotations to make this clear.

Turning to the final possible leg in the transactions, the analyst provided an overview of the notification of invalid and rejected transactions, per presentation slide number 30. These messages were common across all business areas.

A member asked if the participant would receive a reasonable explanation of the reason for the rejection. ASX confirmed that was the intention.

c) Usage Guideline Annotation Standard

Referring to ASX presentation slides numbered 31 to 35, the ASX Senior Business Analyst provided an overview of how annotations would be presented in the 'to-be' usage guidelines compared to the 'as-is' guidelines, and how particular new requirements would be called out.

Where possible ASX would still provide a reference to the equivalent EIS bit position field, noting that not all current EIS bit position fields map in the same way for each ISO message, so users would need to check the annotation in each usage guideline.

ASX would advise in the annotation where an element was an "ASX New Data Requirement" – it is not present in 'as-is' and will be annotated that the EIS Bit Position is not applicable.



ASX would advise in the annotation where the ISO message had a “New Data Requirement” that was a mandatory element in ISO and not present in ‘as-is’.

ASX would also identify in the annotations the Business Rules applicable to the usage guideline.

d) Review feedback on EIS 164 / sett_101 questions

The Chair invited the ASX Project Product Specialist to provide an overview of the questions asked of the committee members, a summary of responses and ASX’s recommendations.

The Specialist noted that 7 members had provided feedback to the questions.

The first question requested feedback on any potential impact by the removal of the “SH” Trade Report code from the sett_101 message. ASX had asked this question because the SH code can be disclosed to the seller but cannot be disclosed to the buyer therefore creating additional build complexity for both messaging and transactions on the ledger. Most responses had confirmed that participants were using the EIS 164 as a reconciliation that the clearing house had received the trade and to cross check some information.

Based on the feedback, ASX recommended that the SH code be removed, as it was still available to participants via the market operator trade feeds which should be considered the source of truth for condition codes.

The second question asked participants to consider any impact of a proposal to merge the Basis of Quotation and Override Basis of Movement fields. Respondents indicated no objections or issues to the proposal. ASX’s recommendation was to merge both fields to a single field called “Basis of Movement”. It was noted that the trade feed would provide any override value and this would be represented in this field. For example, if a special market was requested for a corporate action, the code “CD” would be carried from the trade report into post trade, and ASX would report the equivalent code (e.g. CDIV) in the Basis of Movement field. ASX would provide code lists and translation table for trade and post trade equivalent codes.

The third question was regarding the impact of a consistent approach to the masking of counterparty information, where currently it was not applied to transactions for warrants and ETFs. ASX had considered this proposal to minimise complexities in the build and implementation. Feedback had been mixed so ASX’s recommendation was to leave the masking as is.

The Chair asked if any members had any feedback on the recommendations. Given the recommendations were only presented at this meeting the Chair suggested that members have the opportunity to review, with a deadline of 2 weeks (18 September) for comments. If no objections were received ASX would proceed to implement its recommendations. **(Matters Arising 4 – Action item 63)**

e) Review of ‘to-be’ messaging

The ASX Senior Business Analyst provided an overview of the next set of draft messages for member review including the unilateral and bilateral demand transfer collection of messages (hold_201, hold_202, hold_207, hold_208, hold_209, hold_210), intra-position movement confirmation (hold_205) and the re-



published sett_101, sett_102, sett_104 messages following corrections advised through member feedback.

ASX will advise members when the messages were available in MyStandards for review. ASX was seeking feedback by 25 September, in time for review for the next committee meeting. The Chair encouraged member review, noting that this was critical information to ASX’s implementation, and without comments ASX would proceed on the basis of its own message definition.

Agenda item 7: Next meeting

The Chair noted a number of existing actions and new actions from the meeting, as noted in the minutes and action list, with a number relating to the discussion on unilateral and bilateral demand transfers. Members were also reminded to provide feedback on the recommendations proposed in Agenda item 6d) by 18 September, and to review the new set of published ‘to-be’ messages by 25 September.

With regard to the ASX response paper discussion, ASX would correct the noted omission of SWIFTNet on page 22 and republish the document as soon as possible. ASX would also be providing information the cost of connectivity prior to April 2019. Invitations to the Connectivity and Integration working group will be sent by ASX in the coming week or so.

The Chair confirmed that the next meeting would be held on Tuesday 9 October 2018 in Melbourne, with venue to be confirmed.

ASX had already proposed the agenda items for the next meeting, including an overview of unilateral scheduled settlement flows, party identification (BIC vs. UIC) and the common Technical and Business reject message flow.

The Chair thanked members for their input, and for participating in the meeting. The meeting closed at 4.57 pm.

Signed as a correct record of the meeting.

3 OCTOBER 2018.

Technical Committee Chair

Date



ACTION ITEMS

No.	Meeting Date	Open Action Items	Owner	Due Date
20	2 May 2017	Provide details of a proposed plan including potential topics for the remaining training webinars for feedback, standard training provided by SWIFT, and including identification of business vs. technical topics.	ASX	On hold
51	22 May 2018	ASX to consider how impacted stakeholders could be engaged on the standards for registration details prior to the next meeting.	ASX	9 October 2018
53	22 May 2018	Members to answer 4 questions if they are considering using a BIC as their party identification: whether they would use a new or existing BIC, whether the BIC was connected or non-connected, whether it was a BIC8 or BIC11, and if that BIC would apply to all activity for that organisation or actor, or for multiple activities. Examples would be helpful.	Members	9 October 2018
56	31 July 2018	Provide members with more information on the Corporate Actions STP Phase 2 project.	ASX	9 October 2018
57	31 July 2018	Members to review the consideration to provide a complete set of settlement obligations (net broker, gross broker - per slide #12 from 31 July presentation) and advise feedback to ASX.	Members	9 October 2018
58	31 July 2018	ASX to publish proposed to be messages for updates to accounts – reda_023, reda_020, reda_021 for member review.	ASX	9 October 2018
59	31 July 2018	Share registries to share findings from study of registration details at the 4 September meeting.	Share registries	9 October 2018
60	4 September 2018	ASX to prepare and publish a consolidated list of all actions and outcomes from Technical Committee meetings, and update after each meeting going forward.	ASX	9 October 2018
61	4 September 2018	ASX to ensure coverage of possible scenarios for locking in the requirements, particularly those that are participant driven for certain reasons.	ASX	9 October 2018



No.	Meeting Date	Open Action Items	Owner	Due Date
62	4 September 2018	ASX to review the intended timing for housekeeping of unmatched messages, any standardisation opportunities, whether settlement requests could be future dated. ASX would also consider the visibility of holding locks to issuers on an intra-day basis.	ASX	9 October 2018
63	4 September 2018	Members to review ASX's recommendations regarding changes to the sett_101 as presented in Agenda item 6d) and provide feedback by 18 September 2018.	Members	18 September 2018



No.	Meeting Date	Closed Action Items	Owner	Closed Date
1	13 December 2016	Amend the Charter to reflect that the Chair “will” (instead of “may”) forward copies of the minutes to the Business Committee for endorsement. ASX to publish and distribute final Charter.	ASX	13 December 2016
2	13 December 2016	Provide members with information on how to access SWIFT MyStandards.	ASX	14 March 2017
3	13 December 2016	Provide members with an overview of ISO 20022 training options.	ASX/SWIFT	7 February 2017
4	7 February 2017	Provide members with list of current scope of messages for detailed mapping during first half 2017.	ASX	14 March 2017
5	7 February 2017	Schedule training webinar for the attendance by members and seek and review feedback after the initial webinar.	ASX / SWIFT	14 March 2017
6	7 February 2017	Add link to relevant ISO 20022 information websites to the CHES Replacement web page.	ASX	14 March 2017
7	7 February 2017	Provide more details on access to online education available at swift.com.	SWIFT	14 March 2017
8	7 February 2017	Provide members with the current list of Market Identification Codes (MICs)	ASX	14 March 2017
9	7 February 2017	Provide members with more information on the use of BIC vs. UIC as the party identification code.	ASX / SWIFT	14 March 2017
10	7 February 2017	Market Operators to advise the preferred MIC to be presented in trade related messages as the “Place of Trade”.	ASX, Chi-X, NSX, SSX	6 June 2017
11	7 February 2017	ASX to conduct analysis on whether the identification of a financial instrument is a fixed value or true value of the proprietary code issuer.	ASX	14 March 2017
12	7 February 2017	Provide list of proposed code (i.e. condition or BOM) in ISO 20022 format (4 character) mapped against CHES codes.	ASX	14 March 2017



No.	Meeting Date	Closed Action Item	Owner	Closed Date
13	7 February 2017	Add a general CHES Replacement update to the standing agenda for meetings.	ASX	14 March 2017
14	7 February 2017	Check the next Technical Committee meeting date planned for March and advise members of any change.	ASX	14 March 2017
15	14 March 2017	Schedule future agenda item to discuss transition arrangements, including any changed values (e.g. party identifiers).	ASX	2 May 2017
16	14 March 2017	Create register of matters that may impact upstream, downstream systems or processes, including codes, identifiers and ISO 15022.	ASX	2 May 2017
18	14 March 2017	ASX to draft procedures for change requests to usage guidelines and code lists.	ASX	2 May 2017
21	2 May 2017	Provide a list of standard training topics to share. Noted this action item is combined with action item 20.	SWIFT	6 June 2017
22	2 May 2017	Provide members with a copy of the presentation material from the trial training webinar held on 27 April 2017.	ASX	6 June 2017
24	2 May 2017	Resolve issue with Comments function on MyStandards and advise members when fixed.	ASX/SWIFT	6 June 2017
25	2 May 2017	Provide samples of the proposed consolidation and rationalisation scenarios for EIS 138 and EIS 134.	ASX	6 June 2017
26	2 May 2017	Provide proposal to broaden the engagement and method to seek feedback on key concepts such as consolidation/rationalisation.	ASX	6 June 2017
27	6 June 2017	Publish list of comments received on MyStandards with ASX responses regularly, around the time of each meeting.	ASX	18 July 2017
28	6 June 2017	Re-publish ISO 20022 equivalent of EIS 138 with corrected default value INFO for issuer of financial instrument code.	ASX	18 July 2017
29	6 June 2017	Review EIS 102 mapped equivalent message with Scott Oakland, JPM – optional inclusion of HIN.	ASX	18 July 2017
33	6 June 2017	Provide a presentation of CHES EIS mapping to ISO 20022, and typical ISO 20022 flows to assist committee discussion of key topics (e.g.	ASX	18 July 2017



No.	Meeting Date	Closed Action Items	Owner	Closed Date
		rationalisation, consolidation, descope of certain processes like allegement modify). ASX would also seek input from key members about the best process going forward.		
34	6 June 2017	Add the overview of transaction ids to the July meeting agenda.	ASX	18 July 2017
31	6 June 2017	Sample consolidated (EIS 138) and rationalised (EIS 138 and 134) messages published in the MyStandards community – in a separate collection "Sample Message Review". Members to review and provide further comments via MyStandards, email.	Members	22 August 2017
32	6 June 2017	For Cancel/Correct & Modify, ASX recommendation revised to only do cancel/correct for bilateral modifications (and not allow modify – removal of EIS 121). ASX to contact users of EIS 121, and action remains open until all members confirmed their agreement with the recommendation.	ASX, Members	22 August 2017
30	6 June 2017	Obtain international usage comparisons on the use of UTC time format. Members to provide input from international offices where possible.	ASX, members	22 August 2017
35	18 July 2017	ASX to publish all final draft usage guidelines in MyStandards and highlight to members those usage guidelines that need their review. SWIFT to advise if a flag is available in MyStandards to indicate particular review items.	ASX, SWIFT	22 August 2017
36	18 July 2017	Provide members with details of feature in MyStandards to affirm a comment.	ASX, SWIFT	22 August 2017
17	14 March 2017	Provide further information on party identification for issuers – UIC or BIC and proposed process.	ASX	10 October 2017
37	18 July 2017	Provide comparisons to other market implementations of transaction ids.	ASX, SWIFT	22 August 2017
38	22 Aug 2017	Review consistency of the application of UTC date, date and time, zulu format, and add item to upstream/downstream considerations log re the use of UTC for Trade Date confirmations	ASX	10 October 2017



No.	Meeting Date	Closed Action Items	Owner	Closed Date
		from AMOs (with flow on impact to EIS 164 equivalent).		
40	22 Aug 2017	Provide list of CHES EIS messages in scope for detailed mapping during 2 nd half of 2017, including identification of descoped messages.	ASX	10 October 2017
44	10 Oct 2017	ASX project team to consider effective housekeeping of rights that expire worthless – and whether this could be improved.	ASX	21 November 2017
45	10 Oct 2017	Review recommendations put to committee in Agenda item 6c) – approach to ISO best practice exceptions and provide feedback to ASX.	Members	21 November 2017
46	10 Oct 2017	Review recommendation put to committee in Agenda item 6d) – inclusion of unique event id in Market Infrastructure Tx id (MITI) field.	Members	21 November 2017
47	10 Oct 2017	Allow for future use of Party2+ identification in messages, and ensure discussion on same point at working group meetings re business requirement.	ASX	21 November 2017
19	2 May 2017	Provide sample of demonstration of comparison between ISO 20022 and ISO 15022 messages.	Scott Oakland, JPM	On hold
23	2 May 2017	Further review of the ASX CHES demand reporting summary and responses to questions contained in that summary. ASX to continue review of reports and provide further candidates for descope at meetings.	Members / ASX	21 November 2017
39	22 Aug 2017	Chair to contact members seeking feedback on the approach of the Technical Committee, any suggestions to improve the process.	ASX	21 November 2017
41	22 Aug 2017	Conduct bilateral discussions with share registries and mailing houses regarding structuring of registration details and associated static data.	ASX	21 November 2017
42	22 Aug 2017	Conduct bilateral discussions with share registries regarding current holding balance changes associated with corporate actions and proposed withdrawal of EIS 421.	ASX	21 November 2017



No.	Meeting Date	Closed Action Items	Owner	Closed Date
43	10 Oct 2017	Provide a proposed governance method for Technical Committee input to and review of all matters tabled at the Standards Evaluation Group (SEG), including any matters raised by ASX on behalf of community.	ASX	21 November 2017
48	21 Nov 2017	Members to review information provided in agenda item 6d) and respond to the question – was there appetite for using xml in model 1b or 2a as presented or keep the mapping 1 to 1.	Members	6 February 2018
49	6 February 2018	ASX to confirm additional 'as-is' usage guidelines that could be published in Q2 and members to provide expression of interest in reviewing this set.	ASX	17 April 2018
50	22 May 2018	Digital Asset to review the NDA regarding the DAML SDK and respond to questions around one way vs. two way.	DA	26 June 2018
52	22 May 2018	ASX to give consideration to how it would advise users of any change to the external code lists and report back to members.	ASX	31 July 2018
54	26 June 2018	Members to review and advise ASX of any feedback on the recommendation that Transaction Date Time (<TxDtTm>) in the sett_101 message is UTC.	Members	31 July 2018
55	31 July 2018	A member asked where change requests for SR2019 would be visible. The Senior Manager confirmed ASX would send information on where to find the information. The information is also published on MyStandards.	ASX	4 September 2018



MINUTES OF THE ISO 20022 TECHNICAL COMMITTEE

Tuesday 9 October 2018
NAB offices, Melbourne; Webinar

-
1. **Welcome, Agenda**

 2. **Minutes from last meeting, open actions**

 3. **CHES Replacement project update by ASX**

 4. **ISO 20022 project update by ASX**

 5. **Update from Business Committee**

 6. **Matters for Consideration (Business and Technical Matters)**
 - a) MyStandards Community – ‘to-be’ usage guideline feedback
 - b) Party’s own and Counterparty identification: UIC and BIC
 - c) Unilateral and Bilateral settlement instructions
 - d) Common messages
 - e) Review of ‘to-be’ messages ready to be published

 7. **Next Meeting - 27 November 2018 – Sydney, webinar**



Technical Committee Members

Company	Name	Job Title	Apologies
Australian Payments Network Limited	Andy White	Chief Operating Officer	Apology
Australian Payments Network Limited	Paul Creswick	Security Standards Manager	
Bank of America Merrill Lynch	Andree Hindmarsh	Head of GMOT Australia	
Bank of America Merrill Lynch	Jimmie Alam		
Bell Potter Securities	Dean Surkitt	Managing Director Retail	
BNP Paribas Securities	Penelope Stafford	Manager Settlements	
BNP Paribas Securities	Wayne Murphy	Project Manager	
Boardroom Limited	Tony Robinson	Senior Software Engineer	
Boardroom Limited	Michael Mullins	CIO	
Broadridge (Australia)	Manoj Mathew	Business Analyst	
Broadridge (Australia)	Mabel Chow	Development and Support Manager	
Broadridge (Australia)	Tomas Kliman	Senior Project Manager	
Broadridge (Australia)	James Marsden	APAC Business Development & Strategy	
Broadridge (Australia)	Andy King	Product Specialist	
Broadridge (Australia)	Anil Wali	Product Specialist	
Broadridge (Australia)	Alok Ranjan	Technology Specialist	
CBA Equities	Joel Cox	Technical Business Analyst	
CBA Equities	Carolyn Webb	Test Manager	
CBA Equities	Ben Lowe	Manager Settlements	
Chi-X Australia	Mike Aikins	Head of Solution Development	
Chi-X Australia	Suketu Adhvaryu	Senior Solution Architect	
Citicorp	Miles O'Connor	Director, Direct Custody & Clearing Securities Markets & Securities Services	
Citicorp	Andrew Gibson	Director – Head of Direct Custody and Clearing Australia & NZ	
Citicorp	Brett Dennis	Head of Operations – Party Clearing	
Citicorp	Lyall Herron		
Citicorp	Janice O'Brien	Markets & Securities Services Technology	
Citicorp	Matthew Warner		
Citicorp	Ashok Kumar Balusa		



Company	Name	Job Title	Apologies
Citicorp	Glenn Pahilan		
Citicorp	Stephen Rylands	Product Manager	
CMC Markets Stockbroking	Nikola Vanstan	Change Manager	
Computershare	Paul Walton	Senior Manager, Corporate Actions & New Business Development – Investor Services	
Computershare	Leanne Bailey	Senior Business Analyst Product & Innovation	
Computershare	Laik Tan		
Deutsche Securities	Kevin Novini		
Digital Asset	Fil Mackay	Senior Product Architect	
Dion Global Solutions	Craig Gray	Product Manager – Australia and NZ	
Dion Global Solutions	Nikki Gleisner	Account Manager	
GBST	Sue Schafer	Product Owner	
Goldman Sachs	Darrel Schwarz	Technology Vice President	
Goldman Sachs	Josh Rice		
Goldman Sachs	Nidhi Luthra		
HSBC Securities Services	Gregory Wilkin	Head of HSBC Operations	
HSBC Securities Services	Salih Kulic	Manager Custody	
HSBC Bank Australia Limited	Michael Macintosh	Senior Client Account Manager, Global Liquidity and Cash Management	
HSBC Bank Australia Limited	Anna Fratini	Senior Product Manager – High Value Payments, Clearing and Financial Institutions,	
HSBC Bank Australia Limited	Phyllis Yeung	Senior Analyst	
HSBC	Herman Wong	Manager, Change Management & Delivery	
HSBC	Edmond Chan	Senior IT Development Manager	
HSBC	Cherrie Xu	Head of IT Securities Service	
HSBC	Asri Asat	Optimisation Manager, Securities Service	



Company	Name	Job Title	Apologies
HSBC	Chang Gao	Business Consultant	
JP Morgan	Ed Lawson	Settlements Manager	Apology
JP Morgan	Danny Ng	Middle and Back office AD Manager	
JP Morgan	Scott Oakland	Direct Custody Product Manager Australia	
JP Morgan	Ned Miglez		
JP Morgan	Daniel Smith	VP, Network Management	
JP Morgan	Lesley Henderson	Technology Product team	
Link Group	Ian Batterham	Business Applications Architect	
Link Market Services	Sue Julian	National Manager, Corporate Actions	
Macquarie Group	Paul Bragg	Senior Manager Equities Clearing ANZ	Apology
Macquarie Group	Merrilyn Auton	Manager Operations	
Morgans Financial	Matt Neubauer	Team Leader, Service Management Team	
Morgans Financial	Ed Strike	IT Manager	
Morgan Stanley	Dorothy Wilson	Executive Director, Morgan Stanley Wealth Management, ISG Technology	
Morgan Stanley	Kirsty Venters	VP, Prime Brkrng Funding & Fin Tech	
Morgan Stanley	Oscar Dela Cruz		
Morgan Stanley	Andrew Fielder		
Morgan Stanley	Gordon Davies	VP/Firmwide Ops	
Morgan Stanley	Andrew Sime		
NAB Asset Management	Suresh Chinnappa	Head of Custody Service Operations	
National Australia Bank	Sachin Patel	Senior Analyst, Regulatory Affairs	
National Stock Exchange	Lina Lim	Head of Technology	Apology
Nomura Research Institute	John Ryan	Senior Consultant	
Nomura Research Institute	Ashish Jha		
Northern Trust	Yen Pan Chung	Senior BA, Market Advocacy and Innovation Research	Apology
Securitease	Anton Smith	Director	
Securitease	Chris Werry	Business Analyst	
Securitease	Angela Losurdo	Business Systems Analyst	
Share Investing	Phil Barnes	Senior Manager, Platforms	
SWIFT Standards	Nicole Jolliffe	Senior APAC Standards consultant	



Company	Name	Job Title	Apologies
Sydney Stock Exchange	Leo Zhang	Manager – Market Control	
Sydney Stock Exchange	Omar Obol	Market Control Officer	
Sydney Stock Exchange	Antony Tolfts	Listing Director	
UBS	Phillip Drury	Phillip Drury, Executive Director, Equities IT	
UBS	Duncan Earl	Executive Director, Head of Change, UBS Group Operations	
UBS	Neil Martin	IT – Project Management	
Wealthhub Securities	James Channon	Manager, Capital Markets Trading	

ASX Management

Name	Job Title	Apologies
Tim Hogben	Chief Operating Officer (Chair of the Technical Committee)	Apology
Cliff Richards	Executive General Manager, Equity Post Trade Services	
Katie McDermott	General Manager, Equity Post Trade Services	
Karen Webb	Senior Manager, Equity Post Trade Services (Acting Chair)	
Russell Eyre	Enterprise Architect	
Anne-Marie Fisher-Taylor	Project Subject Specialist	
Darcy Wright	Senior Business Analyst, Equity Post Trade	
Priscilla Ferri de Barros	Senior Business Analyst, Equity Post Trade	
Gary Hobourn	Senior Economic Analyst, Regulatory and Public Policy	Apology
Fraser Moodie	Manager, Integration and Connectivity, CHESS Replacement	
Karen Hamilton	Manager, Business Analysis	
Chris Boyes	Senior Business Analyst	



The meeting commenced at 3.00pm.

Agenda item 1: Agenda overview

The Chair welcomed Technical Committee members to the meeting including members attending by webinar and thanked NAB for hosting the meeting.

The Chair noted that there was a significant standards focus during the month with ASX hosting 4 days of APAC and Global SMPG meetings, followed by the Sibos conference in Sydney. ASX would be presenting a number of times to the SMPG groups who are keen to hear about CHES Replacement in particular, and it is also a good opportunity to meet with the members, some of which are also members of the Settlement Securities Evaluation Group (SEG) and the T2S Evaluation team. ASX is exhibiting and presenting at Sibos, including DLT demos, with over 7,000 delegates expected.

The Chair outlined the Agenda for the meeting, referring to the presentation slides prepared by ASX, including the forward agenda overview provided on ASX presentation slide number 5. The Chair noted that going forward ASX would include ASX functional team representation to set the scene for each topic and be available for feedback and questions. Members were requested to review the forward agenda and suggest any additional topics of interest. The plan for 2019 was not yet available, but was under consideration by ASX and the Chair noted it will likely be discussed at the next meeting.

Agenda item 2: Minutes from last meeting, open actions

The Chair noted that the minutes from the last meeting held on 4 September 2018 had been finalised and no comments had been received from members. The minutes had been distributed and published on the web page.

The Chair noted the outstanding actions from the last meeting as outlined on slide number 6 and 7 of the ASX presentation.

Action item 20 was for ASX to provide a proposed plan for the remaining training webinars. The Chair noted that ASX would be delivering part of this training during the connectivity and integration working groups and welcomed any member suggestions of further training required. **This item remains on hold.**

Action item 51 was for ASX to consider how impacted stakeholders could be engaged on the standards for registration details prior to the next meeting. The Chair noted that a Focus Group will be convened before the end of October to discuss registration details, and that some members of the Technical Committee can expect an invitation to the session. **This item remains open.**

Action item 53 was for members to answer four questions if they are considering using a BIC as their party identification: whether they would use a new or existing BIC, whether the BIC was connected or non-connected, whether it was a BIC8 or BIC11, and if that BIC would apply to all activity for that organisation or actor, or for single or multiple activities. Members were requested to provide examples, if possible. The Chair thanked those participants who responded, and noted that BIC and UIC will be covered later this meeting, and therefore this item can be closed. **This item was closed.**

Action item 56 was for ASX to provide members with more information on the Corporate Actions STP Phase 2 project. The Chair noted that the dedicated project web page is under review, and the first



Working Group meeting will be held in the next week. The Chair proposed the action be closed. **This item was closed.**

Action item 57 was for members to review the consideration by ASX to provide a complete set of settlement obligations (net broker, gross broker) per slide #12 from the 31 July presentation and advise any feedback to ASX. The Chair noted that no further feedback had been received and thanked members for their input. ASX would come back to members when more consideration had been made. IT was likely ASX would look at this item with reporting. The Chair proposed this item be closed. **This item was closed.**

Action item 58 was for ASX to publish proposed “to-be” messages for updates to accounts – reda_023, reda_020, reda_021 for member review. The Chair confirmed that ASX would carry this action over to November as the messages weren’t ready yet for publication. **This item remains open.**

Action item 59 was for share registries to share findings from study of registration details. Refer comments against Action item 51. **This item was closed.**

Action item 60 was for ASX to prepare and publish a consolidated list of all actions and outcomes from Technical Committee meetings, and update after each meeting going forward. ASX will publish the list in the coming days, and appreciates feedback from Technical Committee members whether it proves suitable. **This item remains open.**

Action item 61 was for ASX to ensure coverage of all possible scenarios for locking in the requirements, particularly those that are participant driven for certain reasons. ASX has noted this feedback and that this would be covered off in the focus group discussions. **This item was closed.**

Action item 62 was for ASX to review the intended timing for housekeeping of unmatched messages, any standardisation opportunities, whether settlement requests could be future dated. ASX would also consider the visibility of holding locks to issuers on an intra-day basis. The Chair explained that ASX’s stance is to standardise where possible, and to housekeep on the night of the intended settlement date. Given that ASX has not yet detailed requirements for all the functionality which needs housekeeping, ASX will provide this information as it becomes available (via this forum and likely the Focus Group sessions). **This item remains open.**

Action item 63 was for members to review ASX’s recommendations regarding changes to the sett_101 as presented in Agenda item 6d) and provide feedback by 18 September 2018. Referring to ASX presentation slide number 8, the Project Product Specialist provided a re-cap on the questions and ASX’s previous recommendations. The Project Product Specialist noted that as a result of subsequent feedback from some members, ASX had amended the recommendation per item 1 and would not be making a change. ASX will continue to disclose the ‘SH’ trade report code on the sett_101 message. The recommendations for items 2 and 3 remained unchanged. The Chair noted that if no further feedback, ASX would proceed based on these recommendations. No comments were raised by members. **This item was closed.**



Agenda item 3: CHES Replacement project update by ASX

The Chair invited the Executive General Manager, Equity Post Trade Services to provide an update on the project.

The Executive General Manager noted the retirement of Brendon Luscombe after 43 years in the industry, and new additions to the team including Nichole Alexander and Narelle Rutter.

The software development was on track, and the target date for the Customer Development Environment availability of April 2019 was also on track. A number of internal milestones, including ASX testing the code (in both a unit fashion, and a broader more integrated/automated sense), are also on track.

The delivery of the first tranche of technical documentation (targeting release in December 2018) was also on track - including functional specifications with supporting message specifications, technical manual for ISO 20022 messages and connectivity information. The content will be provided in a different fashion to how ASX presents content today (PDF downloadable from website). Instead it will be a Wiki style website that will provide an interactive experience for users to navigate through the website, with rich search capabilities.

The Executive General Manager noted that the DAML SDK was available in beta format. It would be available to clearing and settlement participants, and their designated vendors. ASX had held a number of workshops to accelerate understanding of the SDK, and had good feedback from those sessions.

A member asked when ASX would be providing advice on when the technical documentation will be available. The Chair advised that ASX was planning to hold a webinar before the documentation becomes available, and to explain how to navigate it. ASX noted an action to advise Technical Committee members of the confirmed date for the webinar. **(Matters Arising 1 – Action item 64)**.

The Executive General Manager outlined the various stakeholder engagement activities in progress including kick off of the Connectivity and Integration working group and Focus group meetings. The Chair also advised that ASX would be shortly published a list of all known stakeholder engagement events on the CHES Replacement webpage.

A member asked if ASX would be providing visibility on the business areas covered by the December documentation and going forward. The Chair noted that the topics for inclusion in the December documentation had already been outlined in ASX's consultation response paper. ASX would provide iterative updates on the content for each subsequent release.

A member asked if ASX would be making available the presentations from the DLT breakfast event held on 23 October and during Sibos. The Chair noted that ASX would be making this material available from the CHES Replacement web page.

Agenda item 4: ISO 20022 project update by ASX

The Chair provided an update on the ISO 20022 project. The latest topics under review by the team included unilateral scheduled and bilateral scheduled message set (for discussion at this meeting), payment facilities – create and update (for discussion at next meeting), review of party identification model (for discussion at this meeting), and continued work on registration details (for discussion at the



Focus Group meeting at end of October). Work was also continuing on refining the Technical Documentation for release in December.

ASX continued its engagement in global ISO groups, with the latest Securities Standards Evaluation Group (SEG) meeting held Monday 24 September. Focus was currently on maintenance working group reviews and approvals of Standards Release 2019 change requests. The meeting also received updates from evaluation teams, including the T2S Evaluation team in which ASX is a participant. The four central banks (4CBs) sponsoring the T2S new messages had submitted revised “admi” and “reda” business area messages with the ISO registration authority for review, and the messages had been accepted for final review. ASX is also interested in further T2S messages, and is waiting to hear when the next batch of messages will be reviewed.

With regard to the change request ASX had submitted to the ISO 20022 registration authority for the Business Application Header (BAH) to include Business Date, ASX advised that it is progressing, and the Technical Support Group (TSG) reviewing the change has minuted that an additional date field will be added to accommodate ASX’s request. The next step is for the registration authority to create a resolution document, then it will be progressed ready for the next maintenance period.

ASX noted that it had progressed lodgement of the Business Justification on 14 September, to reserve new message development across business areas including cash market margining, tax reporting messaging requirements, net cash obligations, and reference data to complete the T2S message set. ASX’s request has been acknowledged as received, and it has been passed to the relevant review team for comment by the end of October.

ASX continues to work to get the MyStandards Readiness Portal set up for December.

Agenda item 5: Update from Business Committee

The Executive General Manager, Equity Post Trade Services noted that the minutes from the most recent Business Committee meeting will be published on ASX’s website. There were five main agenda items at the most recent meeting, including service performance review, regulatory expectations reporting, CHES Replacement project update, administrative matters and a schedule for the next meeting. The next meeting will be held on 29 November 2018.

The CHES Replacement project update was as outlined in Agenda item 3.

Within the service performance review, the operational performance report revealed general activity levels in line with the previous quarter, netting and settlement efficiency remain high, fail rates remain low (0.21% June quarter 2018), and there was a significant increase in mFund transactions over the June quarter 2018. There was a brief discussion on the power outage at the Reserve Bank of Australia on 30 August. A few Business Committee members had asked questions related to notification and communication in such circumstances, and the key takeaways for all stakeholders.

ASX shared the annual report on developments in cash equities clearing and settlement services per regulatory expectations for the year ending 30 June 2018.



ASX provided an update on the external audit of ASX's compliance with its regulatory expectations for cash equities clearing and settlement. The report had concluded that ASX complied in all material respects with its regulatory expectations for the year ending 30 June 2018.

ASX also assured the Business Committee that it was cognisant of participants' requests for pricing information for the CHES Replacement system. ASX confirmed there would be no access costs for the test and development environments, but heard from participants that they need information regarding cost of accessing the replacement system from a production perspective. ASX was working as fast as possible to produce connectivity pricing information.

Agenda item 6: Matters for Consideration

a) MyStandards Community – 'to-be' usage guidelines feedback

The ASX Senior Business Analyst advised that since the last Technical Committee ASX received feedback (40 comments) from 4 members on the 10 published draft guidelines. The comments related to demand unilateral and bilateral transfer, securities holding and settlement. Comments included:

- to change the Transaction ID related to the cancellation messages, noting that ASX would make that change;
- to make supplementary reference mandatory (to avoid secondary matching flag). ASX's preference was not to enforce mandatory matching at this level, and for participants to manage this.
- the Override Basis of Movement value to be optionally provided in the business message element Trade Transaction Condition. ASX agreed this value can be optionally provided.

The ASX Senior Business Analyst stepped through some of the comments, and advised that ASX would be publishing responses to the community as usual.

b) Party's own and Counterparty identification: UIC and BIC

The ASX Manager, Business Analysis outlined that participants requested the ability for CHES Replacement to be enabled to support SWIFT BICs as party identifier in addition to UICs. Currently, UICs are used to identify both own party and counterparty on bilateral CHES messages, and some participants already have BICs whilst others do not.

The Manager, Business Analysis then outlined ASX's proposed solution. ASX is not proposing that all participants need to acquire BICs. Instead, ASX are proposing to record against each participant a UIC, BIC (where available) and that participant's preference to use BICs or UICs in messages. Participants with a preference for UICs will continue to receive UICs on all messages from ASX. Participants with a preference for BICs will receive a BIC where available, else they will receive a UIC. ASX will maintain and publish a directory of UICs and BICs for all participants. BICs must be unique in the system and participants with multiple UICs but a single BIC will be required to consolidate under one UIC to utilise the BIC functionality.

The ASX Senior Business Analyst then stepped through how the BIC and UIC preference will be used in the messages. UIC and BIC can be found in two layers, the Transport layer with SWIFTNet and other channels, and the Business Message, comprising the Business Application Header (BAH) and the Document. The Analyst noted that Transport would be covered separately in the Connectivity and Integration working group.



A member asked if ASX had a clear view yet of participant preferences (to use BIC), as this would impact the transaction id for example. The Chair confirmed there was not a firm view yet and that would be an activity covered off during the development/testing phase.

Referring to ASX presentation slide number 21, the Analyst noted that on inbound ISO 20022 Business messages (BAH and Document), whether the participant chooses between UIC and BIC, ASX will not validate against the participant's preference. The Analyst noted that if the participant chooses to work with UIC, that should match the participant identification in the BAH business message identifier, transaction Id (first) and Settlement Parties <Party 1>.

Referring to ASX presentation slide number 22, the Analyst noted that for outbound ISO 20022 Business messages (BAH and Document), outbound meaning from ASX to participant, for the participant identification there is always a choice between UIC and BIC (generated based on Participant preference). For the counterparty identification, there is always a choice between UIC and BIC (generated based on preference when possible). ASX will send the message according to participant preference.

A member asked that if ASX informs the share registry about a holder and their respective participant, would ASX use UIC references, because that is probably the registry's preference to receive UIC. ASX confirmed this is the case, and added that even if ASX is accommodating the preferences for party identification within the message, participants will need to accommodate in their message build the fact that a participant will receive a BIC or UIC in some of the content – for example as part of the transaction id (accommodate flexible size up to 35 characters with different location of delimiter).

A member asked whether ASX will be providing a cross-reference for participants and others between BIC and UIC. The Chair confirmed that ASX currently publishes a participant list that references PIDs, and that ASX will do something similar, likely published within the technical documentation. A member asked whether the information will be in the node, and the Chair noted this was a consideration ASX would take into migration (**Matters Arising 2 – Action item 65**).

c) Unilateral and Bilateral settlement instructions

Referring to ASX presentation slide number 23, the Manager, Business Analysis, noted that the unilateral and bilateral settlement instructions are a combination of existing CHES EIS 105 and EIS 107 to a single message and workflow (sett_105 / USSI). The idea behind locking is to improve client protection by allowing participants to reserve units in their Direct and Sponsored HINs for the fulfilment of a specific scheduled settlement instruction. This is new and optional functionality. In terms of when a lock can be applied, a lock can occur on request on a unilateral or bilateral settlement instruction, or after a match has occurred on the bilateral settlement instruction. The Chair noted that the Focus Group in November will talk to this topic in greater detail.

A member asked whether the Focus Group will talk about the environment around locks, for example any impact to corporate actions on the registry side. The Manager, Business Analysis, confirmed that the agenda is still being formulated and is willing to accept feedback when forming that agenda. Members were asked to email ASX at the CHES Replacement mailbox. [**Matters arising 3 – Action item 66**]

A member asked whether the locking function used the current EIS 001 or EIS 107 equivalent. The Manager confirmed that ASX would need to understand what can be done to locked units (like corporate actions) and that there would be more general locks. A member asked how this was different to the EIS



107 – would it be the same premise to apply to transfers as a whole. Would this be eligible for CMM. ASX confirmed this was in discussion with its risk team.

Referring to ASX presentation slide number 24, the Manager, Business Analysis, noted several business requirements, and the field and status required for each. Trust amount is now a conditional field, based on the Participant Type (Broker/Non Broker) and Delivering/Receiving HIN. There is a new Settlement Link Id, which provides participants the choice to link instructions for the same HIN, Date, Security and Basis of Movement. The Override Tolerance allows a participant to provide a matching tolerance higher than the ASX provided tolerance. The Identification field allows a participant to request to lock securities either upon request for Unilateral and Bilateral Settlement Instructions or after matched for Bilateral Settlement Instructions.

A member asked if a request to lock was sent to ASX and the units weren't available would the participant receive a reject message. The Manager, Business Analysis confirmed that if it was an unmatched instruction and there was not enough units, the Participant would receive the reject message comm_808. If it was a matched instruction and there was not enough units then the instruction would not be rejected, the Participant would receive sett_106 - Settlement Instruction Response with the lock status: Not locked NOLO.

The member asked about DvP settlement outside the batch. The Manager confirmed this functionality was being addressed, to be known as Bilateral Demand Settlement Instructions (real time) and would be discussed at the next meeting.

The ASX Senior Business Analyst then stepped through the 'to-be' settlement instruction consolidation of the following message types: request; confirmation "status"; unmatched request; allegation; cancel request; cancel response; cancel status advice; cancellation withdrawal request; cancellation withdrawal response; update request and update response. ASX will publish all the umls with the transaction Id, and external code lists with samples in MyStandards.

Referring to ASX presentation slide number 32, the xml tag and type/code for the sett_105 Settlement Instruction Request and sett_106 Settlement Instruction Response was explained.

A member asked why ASX was creating multiple usage guidelines for the same ISO base message, instead of creating only one guideline per ISO message. The ASX Senior Business Analyst explained that ASX's approach is to combine similar business processes – for example unilateral and bilateral scheduled settlement instructions has the same elements. ASX could just create one message to settle everything unilateral, or bilateral, demand or scheduled settlement instruction, but this would require a lot of rules within the elements that the matching needs to deal with. For some scenarios elements are optional and others mandatory, and ASX has tried to consolidate as much as possible, but not so much as to make the matching too hard. ASX agreed to review the messages in light of this comment (**Matters arising 4 – Action item 67**), and the member was asked to send through the specific list of messages in question. The Chair added that ASX had shared learnings with the committee from the T2S implementation, where a single message is used but with complicated implementation in different circumstances, and re-iterated the need to strike a balance between consolidation and usability.

The ASX Senior Business Analyst outlined ASX's intentions for the safekeeping account (HIN). A member asked whether they needed to know the receiving HIN details to send the instruction. ASX confirmed that if the transaction was bilateral, ASX couldn't send the HIN in the allegation message. If unilateral then



same as for today. Another member asked about previous conversations around adding underlying/beneficial holder information, and whether that information will be recorded? The Manager, Business Analysis, noted that the introduction of the Linked Id functionality will help to support this, and that it is a topic that will be covered in greater detail in the Focus Group to be held on 7 November.

Locking Units for Settlement within the Delivering HIN after a settlement instruction has been received was explained. The unit quantity must be the same as the Settlement instruction (no partial lock will be allowed).

d) Common messages

Referring to ASX presentation slides numbered 38 to 40, the ASX Senior Business Analyst provided an update on the reject and invalid transaction common messages. ASX performs a series of Technical (Schema) and Business validations on each message received. The comm_807 and comm_808 messages will be published to the MyStandards community for review. A member asked if the reason codes would be the same as for CHES today or new. ASX Senior Business Analyst confirmed they would be new in 4 character format with equivalent description, as published by ASX.

e) Review of 'to-be' messaging

The ASX Senior Business Analyst provided an overview of the next set of draft messages to be published for member review including unilateral and bilateral settlement instruction and rejection messages.

ASX will advise members when the messages were available in MyStandards for review. ASX was seeking feedback by 16 November, in time for review for the next committee meeting on 27 November.

Agenda item 7: Next meeting

The Chair noted a number of existing actions and new actions from the meeting, as noted in the minutes and action list. The Chair apologised for the audio technical difficulties experienced throughout the meeting, and advised an email would be sent tomorrow seeking interest in a re-run of the meeting. Members were also reminded to review the 14 draft published messages by 16 November.

The Chair confirmed the actions arising this meeting:

- ASX to advise when calendar of stakeholder engagement events is publically available, and confirm the date for the technical documentation presentation;
- ASX will publish comments on the feedback received on the latest set of messages reviewed in MyStandards;
- ASX will notify when the list of closed actions and noted outcomes will be published. The document will be updated after each meeting;
- Regarding the comments around BIC and UIC, ASX will advise how it will publish the participant list, including one or both of those codes if they are available for each participant, the participant's preference and advise how that information will be published;
- ASX would republish the meeting presentation, noting corrections to slides numbered 27 and 28,



A member asked if all new functionality would be available in both the node and messaging options. The Manager, Business Analysis confirmed that would be the case. ASX would also provide a mapping translation for the connectivity options.

The Chair confirmed that the next meeting would be held on Tuesday 27 November 2018 in Sydney.

ASX had already proposed the agenda items for the next meeting, including demand settlement instructions, account management and payment facility.

The Chair thanked members for their input, and for participating in the meeting. The meeting closed at 4.50 pm.

Signed as a correct record of the meeting.

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

Technical Committee Chair (Acting)

A handwritten date in blue ink, '21/11/18', written over a horizontal line.

Date



ACTION ITEMS

No.	Meeting Date	Open Action Items	Owner	Due Date
20	2 May 2017	Provide details of a proposed plan including potential topics for the remaining training webinars for feedback, standard training provided by SWIFT, and including identification of business vs. technical topics.	ASX	On hold
51	22 May 2018	ASX to consider how impacted stakeholders could be engaged on the standards for registration details prior to the next meeting.	ASX	27 November 2018
58	31 July 2018	ASX to publish proposed to be messages for updates to accounts – reda_023, reda_020, reda_021 for member review.	ASX	27 November 2018
60	4 September 2018	ASX to prepare and publish a consolidated list of all actions and outcomes from Technical Committee meetings, and update after each meeting going forward.	ASX	9 October 2018
62	4 September 2018	ASX to review the intended timing for housekeeping of unmatched messages, any standardisation opportunities, whether settlement requests could be future dated. ASX would also consider the visibility of holding locks to issuers on an intra-day basis.	ASX	27 November 2018
64	9 October 2018	ASX to advise Members the confirmed date for Technical Documentation release in December, and the associated webinar details.	ASX	27 November 2018
65	9 October 2018	ASX to consider if information such as participant party identification and preferences would be available within the node (in addition to published) and confirm to members as part of migration activity.	ASX	27 November 2018
66	9 October 2018	Members to consider any specific topics regarding settlement, holding locks for inclusion in the agenda of the upcoming Focus group and advise ASX.	Members	31 October 2018
67	9 October 2018	ASX to review level of consolidation for Unilateral and Bilateral settlement instructions usage guidelines.	ASX	27 November 2018



No.	Meeting Date	Closed Action Items	Owner	Closed Date
1	13 December 2016	Amend the Charter to reflect that the Chair “will” (instead of “may”) forward copies of the minutes to the Business Committee for endorsement. ASX to publish and distribute final Charter.	ASX	13 December 2016
2	13 December 2016	Provide members with information on how to access SWIFT MyStandards.	ASX	14 March 2017
3	13 December 2016	Provide members with an overview of ISO 20022 training options.	ASX/SWIFT	7 February 2017
4	7 February 2017	Provide members with list of current scope of messages for detailed mapping during first half 2017.	ASX	14 March 2017
5	7 February 2017	Schedule training webinar for the attendance by members and seek and review feedback after the initial webinar.	ASX / SWIFT	14 March 2017
6	7 February 2017	Add link to relevant ISO 20022 information websites to the CHES Replacement web page.	ASX	14 March 2017
7	7 February 2017	Provide more details on access to online education available at swift.com.	SWIFT	14 March 2017
8	7 February 2017	Provide members with the current list of Market Identification Codes (MICs)	ASX	14 March 2017
9	7 February 2017	Provide members with more information on the use of BIC vs. UIC as the party identification code.	ASX / SWIFT	14 March 2017
10	7 February 2017	Market Operators to advise the preferred MIC to be presented in trade related messages as the “Place of Trade”.	ASX, Chi-X, NSX, SSX	6 June 2017
11	7 February 2017	ASX to conduct analysis on whether the identification of a financial instrument is a fixed value or true value of the proprietary code issuer.	ASX	14 March 2017
12	7 February 2017	Provide list of proposed code (i.e. condition or BOM) in ISO 20022 format (4 character) mapped against CHES codes.	ASX	14 March 2017

No.	Meeting Date	Closed Action Items	Owner	Closed Date
13	7 February 2017	Add a general CHES Replacement update to the standing agenda for meetings.	ASX	14 March 2017
14	7 February 2017	Check the next Technical Committee meeting date planned for March and advise members of any change.	ASX	14 March 2017
15	14 March 2017	Schedule future agenda item to discuss transition arrangements, including any changed values (e.g. party identifiers).	ASX	2 May 2017
16	14 March 2017	Create register of matters that may impact upstream, downstream systems or processes, including codes, identifiers and ISO 15022.	ASX	2 May 2017
18	14 March 2017	ASX to draft procedures for change requests to usage guidelines and code lists.	ASX	2 May 2017
21	2 May 2017	Provide a list of standard training topics to share. Noted this action item is combined with action item 20.	SWIFT	6 June 2017
22	2 May 2017	Provide members with a copy of the presentation material from the trial training webinar held on 27 April 2017.	ASX	6 June 2017
24	2 May 2017	Resolve issue with Comments function on MyStandards and advise members when fixed.	ASX/SWIFT	6 June 2017
25	2 May 2017	Provide samples of the proposed consolidation and rationalisation scenarios for EIS 138 and EIS 134.	ASX	6 June 2017
26	2 May 2017	Provide proposal to broaden the engagement and method to seek feedback on key concepts such as consolidation/rationalisation.	ASX	6 June 2017
27	6 June 2017	Publish list of comments received on MyStandards with ASX responses regularly, around the time of each meeting.	ASX	18 July 2017
28	6 June 2017	Re-publish ISO 20022 equivalent of EIS 138 with corrected default value INFO for issuer of financial instrument code.	ASX	18 July 2017
29	6 June 2017	Review EIS 102 mapped equivalent message with Scott Oakland, JPM – optional inclusion of HIN.	ASX	18 July 2017
33	6 June 2017	Provide a presentation of CHES EIS mapping to ISO 20022, and typical ISO 20022 flows to assist committee discussion of key topics (e.g.	ASX	18 July 2017



No.	Meeting Date	Closed Action Items	Owner	Closed Date
		rationalisation, consolidation, descope of certain processes like allegement modify). ASX would also seek input from key members about the best process going forward.		
34	6 June 2017	Add the overview of transaction ids to the July meeting agenda.	ASX	18 July 2017
31	6 June 2017	Sample consolidated (EIS 138) and rationalised (EIS 138 and 134) messages published in the MyStandards community – in a separate collection “Sample Message Review”. Members to review and provide further comments via MyStandards, email.	Members	22 August 2017
32	6 June 2017	For Cancel/Correct & Modify, ASX recommendation revised to only do cancel/correct for bilateral modifications (and not allow modify – removal of EIS 121). ASX to contact users of EIS 121, and action remains open until all members confirmed their agreement with the recommendation.	ASX, Members	22 August 2017
30	6 June 2017	Obtain international usage comparisons on the use of UTC time format. Members to provide input from international offices where possible.	ASX, members	22 August 2017
35	18 July 2017	ASX to publish all final draft usage guidelines in MyStandards and highlight to members those usage guidelines that need their review. SWIFT to advise if a flag is available in MyStandards to indicate particular review items.	ASX, SWIFT	22 August 2017
36	18 July 2017	Provide members with details of feature in MyStandards to affirm a comment.	ASX, SWIFT	22 August 2017
17	14 March 2017	Provide further information on party identification for issuers – UIC or BIC and proposed process.	ASX	10 October 2017
37	18 July 2017	Provide comparisons to other market implementations of transaction ids.	ASX, SWIFT	22 August 2017
38	22 Aug 2017	Review consistency of the application of UTC date, date and time, zulu format, and add item to upstream/downstream considerations log re the use of UTC for Trade Date confirmations	ASX	10 October 2017

No.	Meeting Date	Closed Action Items	Owner	Closed Date
		from AMOs (with flow on impact to EIS 164 equivalent).		
40	22 Aug 2017	Provide list of CHES EIS messages in scope for detailed mapping during 2 nd half of 2017, including identification of descope messages.	ASX	10 October 2017
44	10 Oct 2017	ASX project team to consider effective housekeeping of rights that expire worthless – and whether this could be improved.	ASX	21 November 2017
45	10 Oct 2017	Review recommendations put to committee in Agenda item 6c) – approach to ISO best practice exceptions and provide feedback to ASX.	Members	21 November 2017
46	10 Oct 2017	Review recommendation put to committee in Agenda item 6d) – inclusion of unique event id in Market Infrastructure Tx id (MITI) field.	Members	21 November 2017
47	10 Oct 2017	Allow for future use of Party2+ identification in messages, and ensure discussion on same point at working group meetings re business requirement.	ASX	21 November 2017
19	2 May 2017	Provide sample of demonstration of comparison between ISO 20022 and ISO 15022 messages.	Scott Oakland, JPM	On hold
23	2 May 2017	Further review of the ASX CHES demand reporting summary and responses to questions contained in that summary. ASX to continue review of reports and provide further candidates for descope at meetings.	Members / ASX	21 November 2017
39	22 Aug 2017	Chair to contact members seeking feedback on the approach of the Technical Committee, any suggestions to improve the process.	ASX	21 November 2017
41	22 Aug 2017	Conduct bilateral discussions with share registries and mailing houses regarding structuring of registration details and associated static data.	ASX	21 November 2017
42	22 Aug 2017	Conduct bilateral discussions with share registries regarding current holding balance changes associated with corporate actions and proposed withdrawal of EIS 421.	ASX	21 November 2017



No.	Meeting Date	Closed Action Items	Owner	Closed Date
43	10 Oct 2017	Provide a proposed governance method for Technical Committee input to and review of all matters tabled at the Standards Evaluation Group (SEG), including any matters raised by ASX on behalf of community.	ASX	21 November 2017
48	21 Nov 2017	Members to review information provided in agenda item 6d) and respond to the question – was there appetite for using xml in model 1b or 2a as presented or keep the mapping 1 to 1.	Members	6 February 2018
49	6 February 2018	ASX to confirm additional 'as-is' usage guidelines that could be published in Q2 and members to provide expression of interest in reviewing this set.	ASX	17 April 2018
50	22 May 2018	Digital Asset to review the NDA regarding the DAML SDK and respond to questions around one way vs. two way.	DA	26 June 2018
52	22 May 2018	ASX to give consideration to how it would advise users of any change to the external code lists and report back to members.	ASX	31 July 2018
54	26 June 2018	Members to review and advise ASX of any feedback on the recommendation that Transaction Date Time (<TxDtTm>) in the sett_101 message is UTC.	Members	31 July 2018
55	31 July 2018	A member asked where change requests for SR2019 would be visible. The Senior Manager confirmed ASX would send information on where to find the information. The information is also published on MyStandards.	ASX	4 September 2018
53	22 May 2018	Members to answer 4 questions if they are considering using a BIC as their party identification: whether they would use a new or existing BIC, whether the BIC was connected or non-connected, whether it was a BIC8 or BIC11, and if that BIC would apply to all activity for that organisation or actor, or for multiple activities. Examples would be helpful.	Members / ASX	9 October 2018
56	31 July 2018	Provide members with more information on the Corporate Actions STP Phase 2 project.	ASX	9 October 2018
57	31 July 2018	Members to review the consideration to provide a complete set of settlement obligations (net broker, gross broker - per slide #12 from 31 July presentation) and advise feedback to ASX.	Members	9 October 2018



No.	Meeting Date	Closed Action Items	Owner	Closed Date
59	31 July 2018	Share registries to share findings from study of registration details at the 4 September meeting.	Share registries	9 October 2018
61	4 September 2018	ASX to ensure coverage of possible scenarios for locking in the requirements, particularly those that are participant driven for certain reasons.	ASX	9 October 2018
63	4 September 2018	Members to review ASX's recommendations regarding changes to the settl_101 as presented in Agenda item 6d) and provide feedback by 18 September 2018.	Members	18 September 2018



BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 3A	
Topic	Minutes from 28 September 2018 Business Committee Meeting
Date	29 November 2018
Purpose of this paper	To provide Business Committee members with the minutes and Business Committee report to the ASX Boards from the 28 September 2018 meeting.

OVERVIEW

Draft minutes and the draft report to the Boards of ASX Clear and ASX Settlement from the 28 September 2018 Business Committee meeting were emailed to all members of the Business Committee on 17 October 2018 for comment. The Secretariat did not receive any comments from members.

The Business Committee report and minutes will be formally presented to the next meeting of the ASX Clear and ASX Settlement Boards.

ATTACHMENTS

Attachment A – Business Committee Report and Minutes from the 28 September 2018 Meeting.

Business Committee Report to the Boards of ASX Clear and ASX Settlement

Business Committee Meeting

At its 28 September 2018 meeting, the Business Committee was updated on the:

- operating performance of CHES for the September Quarter 2018 to date;
- the annual report on developments in ASX's cash equity CS services and the external audit of ASX's compliance with CFR's regulatory expectations;
- progress with the CHES replacement project; and
- Technical Committee's progress in mapping CHES messages to the ISO 20022 standards.

KEY ISSUES DISCUSSED

The Committee was presented with the annual service development report which set out the activities ASX had undertaken during FY to enhance cash equity CS services. There was also a discussion about the external audit of ASX's compliance with its regulatory expectations obligations, including a request from one member for a process to respond to additional comments from Committee members outside of the scope of the audit questions.

The Committee was provided with a project update, a summary of ASX's response to the feedback received to the CHES replacement consultation paper, and an outline of upcoming stakeholder engagement activities.

Agreed Actions

ASX management would respond to the member request relating to additional comments provided through the audit process.

ASX would publish (and keep updated) a program of CHES replacement stakeholder engagement activities on its website.

Minutes

Business Committee Meeting

Date	28 September 2018	Time	12:00pm – 2:00pm
Location	ASX Offices – Level 1, 20 Bridge Street, Sydney		

1. Service Performance

- a) Cash Market Clearing and Settlement - Operating Performance
-

2. Regulatory Expectations

- a) Annual Cash Equities Clearing and Settlement Reports
 - Report on cash equities clearing and settlement services developments
 - Audit report on ASX's compliance with the Regulatory Expectations.
-

3. CHES Replacement Project

- a) CHES Replacement
 - Software development update
 - Overview of new Day 1 scope and implementation plan following the consultation
 - Customer engagement – upcoming activities
 - b) ISO 2022 Technical Committee Report and Minutes
 - Members will receive reports from the June, July & September meetings.
-

4. Administration

- a) Minutes from the 5 July 2018 Business Committee Meeting
 - b) Forward work program
 - c) Other matters
-

5. Next Meeting - 29 November 2018

Business Committee Members

Company	Name	Job Title	Apologies
ABN AMRO Clearing	Tapos Thakur (delegate)	Chief Risk Officer, APAC	Barry Parker
ACSA	Rob Brown	Chief Executive Officer	
AFMA	David Lynch	Chief Executive Officer	
ANZ	Peter Mullin	Managing Director, Pensions & Investments	Peter Mullin
ASX	Peter Hiom	Business Committee Chair, Deputy CEO	
Bank of America Merrill Lynch	Andree Hindmarsh (delegate)	Director Global Markets Technology	Rhys Cahill
Bell Potter Securities	Rodd Kingham	Head of Operations – Transformation	
BNP Paribas	Mark Wootton	Head of Custody Product, Aust & NZ	
Chi-X Australia	Mike Aikins	Chief Operating Officer	
Citi	Swaminath Nagarajan (delegate)	Vice President Business Unit Manager	Miles O'Connor
Commonwealth Bank of Australia	Sheridan Thompson	Head of Strategic Development, CommSec	
Credit Suisse	Winston Loke	Australia Equities COO	Winston Loke
Deutsche Bank AG	Geoffrey Plaisted	Chief Operating Officer, Equities	
Goldman Sachs	Yen Le	Executive Director	
HSBC	Peter Snodgrass	Head of Direct Custody and Clearing	
J.P. Morgan	Jonathan Evans	Head of Custody and Markets Operations	
Macquarie Group	James Indge	Cash Equities Business Manager	
Morgan Stanley	Craig McGuire	Head of Operations	
Morgans	Peter Chisholm	Manager, Transactional Services & Settlement Systems	
National Australia Bank	Greg Bowrey	General Manager, Self-Directed Wealth Products & Markets	
NSX	John Williams (delegate)	Head of Admissions	Ann Bowering
Pershing Securities	Leigh Conder	Chief Operating Officer	Leigh Conder
Stockbrokers and Financial Advisers Association	Andrew Green	Chief Executive Officer	
Sydney Stock Exchange	Antony Tolfts	Listings Director	
UBS	Scott Hanlon (delegate)	Head of Investment Bank Operations	Conor Foley

ASX Management

Name	Job Title
Tim Hogben	Chief Operating Officer
Daniel Moran	General Counsel
Hamish Treleaven	Chief Risk Officer
Cliff Richards	Executive General Manager, Equity Post Trade Services
Sally Palmer	Deputy General Counsel
Con Korkofigas	Senior Manager and Senior Legal Counsel
Gary Hobourn	Senior Economic Analyst, Regulatory and Public Policy
Karen Webb	Senior Manager, Equity Post Trade Services
Keith Purdie	Senior Manager, Equity Post Trade Services
Suzy Munro	General Manager, Post Trade Operations
Katie McDermott	General Manager, Equity Post Trade

INTRODUCTION

The Chair welcomed members and delegates to the third meeting of the year, including new representatives Rodd Kingham (Bell Potter) and Antony Tolfts (Sydney Stock Exchange). He noted that Peter Mullin (ANZ), Winston Loke (Credit Suisse) and Leigh Conder (Pershing Securities) had sent apologies and a few members had nominated delegates to attend on their behalf: Tapos Thakur (ABN AMRO Clearing), Andree Hindmarsh (BAML), Swaminath Nagarajan (Citi), Scott Hanlon (UBS) and John Williams (NSX).

Three members dialled in to the meeting: Yen Le (Goldman Sachs), Greg Bowery (NAB) and John Williams (NSX).

AGENDA ITEM 1: SERVICE PERFORMANCE

a) Operating Performance Report

The ASX General Manager, Post-Trade Operations spoke to the September quarter performance report¹ noting that:

- Overall activity levels are broadly in line with the previous quarter.
- Netting and settlement efficiency remains high.
- Fail rates continued to be very low for the July-August period (0.21%).
- There was a significant increase in mFund transactions during the quarter and there are over 200 funds on the platform.

The ASX General Manager, Post-Trade Operations also updated members on two other matters:

- Recent changes to the registered holder collateral cover authorisation (RHCCA) process which links a customer's ETO account with their HIN to allow the stock to be used as collateral for an options position. Following recent regulatory approvals the requirement for paper forms will be removed from 1 March 2019 and replaced with an email-based process which should deliver process efficiencies for participants.
- The impact the 30 August RBA power outage (also affecting RITS) had on ASX and its customers. Daily settlement of cash equities commenced as normal on that day but was paused at the point prior to where payment instructions are sent to RITS for finalisation. At 3:00pm ASX manually entered the cash payments into RITS and the settlement batch was completed by 4:00pm. CHES end of day cut-off was extended from 7:00pm to 8:00pm.
 - ASX is reviewing, in conjunction with CS participants and payment providers, a number of processes (as they apply to both CHES and Austraclear) following the outage. For example, whether it would be possible to rewind the CHES batch at different points in the process and whether there are other options to fund settlement instructions where RITS is unavailable.
 - A member supported the need to review CHES processes to reduce uncertainty in similar circumstances in the future by giving participants some idea how particular scenarios might be addressed.

AGENDA ITEM 2: REGULATORY EXPECTATIONS

a) Annual Cash Equities Clearing and Settlement Reports

The ASX Executive General Manager Equity Post-Trade Services outlined the contents of the annual report provided, under the regulatory expectations, on developments in ASX's cash equity settlement services. He noted that in addition to the substantial work undertaken on CHES replacement there were a number of other enhancements progressed during FY18 including:

- ISIN standardisation to ensure compliance with global standards, particularly around the re-use of ISINs.
- Changes to assist participants with MIFID compliance.

¹ Up to end August 2018

- Changes to trade registration settlement dates under the Trade Acceptance Service and changes to AMO operational procedures.
- Changes to facilitate the retaining of the user identification code (UIC) when there is a change in share registry, reducing the time and effort necessary to affect a change.
- Changes to the process involved in processing custodian off-market transfers between sub-registers. Members were updated on the recent consultation in relation to this initiative. A total of 12 responses had been received. While there was broad support for the removal of the requirement for a signed authorisation form, some respondents supported additional changes or raised further considerations to address investor protections. ASX is considering the submissions received and will also engage with regulators prior to finalising its position.
- Some work has been commenced on improving the processes for the acceptance of off-market takeover offers to address issues raised by share registries around confirming a holder's intentions.

Members had no questions on the annual service developments report.

The ASX Senior Economic Analyst, Regulatory and Public Policy, provided an update on the external audit of ASX's compliance with its Regulatory Expectations obligations:

- PWC has completed the audit and a report of the findings are included in the Business Committee meeting pack. The audit examined ASX's policies and procedures to ensure compliance with its obligations.
- The audit concluded that ASX had complied in all material respects with the regulatory expectations for the year ending 30 June 2018. There were no recommendations for changes to ASX's procedures.
- The auditors discussed their findings with the ASX Clear and ASX Settlement Boards and a copy of the audit report was provided to the CFR agencies for their information.
- As part of the process Business Committee members had received a questionnaire and a total of 11 responses were received by PWC. There were no instances raised in these responses of any non-compliance with the Regulatory Expectations.

A member asked whether, and how, the views expressed by members to the questionnaire were represented to the ASX Boards and whether any feedback could be provided to the Committee on the suggestions made around improving existing processes. In particular, he requested a process where feedback on any issues raised by members could be discussed. This could include, for example, the auditors or a Board member attending the Business Committee to discuss the audit findings.

The ASX Group General Counsel noted that in their presentations to the Board, in addition to their findings on compliance, the auditors provided a summary of other views received and responded to questions on the audit. He declined to describe that internal Board discussion in more detail. It was noted that the purpose of the audit is to assess compliance with the regulatory obligations rather than a broader information gathering exercise.

The Chair summed up the discussion by agreeing that useful points had been made during the discussion and that, while some of the supplementary issues raised during the process might fall outside the scope of the audit, ASX would consider how best to capture member feedback on ways to improve the Committee's operations and facilitate discussion on matters raised.

A member questioned whether there was any significance in the fact that the report stated that there were 'no material' instances of non-compliance and if this implied there may have been some non-material instances. The ASX Group General Counsel noted that the scope of the audit was to identify 'material' breaches and there was no other significance in the choice of words. It was also confirmed that the auditor had expressed no concerns during the course of the audit and had made no recommendations for changes to existing processes.

AGENDA ITEM 3: CHESSE REPLACEMENT PROJECT

a) CHESSE Replacement

The ASX General Manager Equity Post-Trade Services advised members that the scheduled first drop of CHESSE replacement software into the customer development environment is on track for delivery in April 2019 with the first tranche of technical documentation being released in December 2018.

She noted that future software drops and documentation releases will occur iteratively every 6-8 weeks and ASX will be providing a six-month forward program of upcoming releases.

Several DAML (Digital Asset Modelling Language) training sessions have been held for clearing and settlement participants and their vendors on how to develop templates and build DAML workflows. She invited any other participants or vendors who are interested to contact ASX or Digital Asset to arrange a training session.

The ASX Executive General Manager Equity Post-Trade Services updated the Committee on the changes to the CHESSE replacement scope and implementation plan ASX has announced in response to the feedback received to the recent consultation.

ASX had listened closely to feedback that the proposed plan was very aggressive in terms of both its scope and implementation timeline. Taking that feedback on board, ASX spent time working out the benefits to users of each measure, the cross-dependencies between some of the proposed functionality as well as the need for further consultation with users and regulators to determine which enhancements could be deferred from the Day 1 scope.

A total of seven enhancements were deferred to after the industry has transitioned to the replacement system. ASX will continue the necessary preparation work on these items but they will be rolled out to users at a later date. He also confirmed that ASX is now targeting an April-March 2021 cutover window to the new system.

He also called-out and responded to a number of questions/issues that had been raised in consultation responses:

- A request for more clarity on pricing of connectivity options to assist participants in making decisions.
 - It was noted that there will be no costs associated with access to the development and test environments for the node-based option.
 - ASX is currently working to develop, as soon as possible, a pricing structure for the connectivity models. That is, a traditional message-based connectivity and DLT node integration which provides a range of other real-time services and benefits to users. There may be a menu of options within the DLT connectivity model and these still need to be defined before a pricing structure can be developed.
- A number of respondents identified the information they will require to conduct a meaningful cost-benefit analysis on the different options. Members stressed the importance of understanding the pricing structure for them to be in a position to make connectivity decisions and to commit resources to the development environment when the first set of technical documentation is released.
 - ASX acknowledged the need to provide the necessary information (particularly around pricing and technical information on the node-based option) as soon as possible.
- A request for a detailed program of technical documentation releases.
 - Technical documentation will be released at least three months prior to each incremental software drop into the customer development environments.
 - ASX and Digital Asset, are currently targeting seven software releases leading up to Day 1 with a complete system build by end March 2020, twelve months prior to go live.
 - To assist participants and their technology vendors with planning, ASX will provide a six-month forward view of the upcoming document releases. Providing a longer term program would inhibit the ability to be efficient and flexible in sequencing and producing the software.

- Concerns from some respondents around the decision to have a single cut-over weekend to the new system.
 - Based on the current timeline, there will be a 12 month period available for exhaustive testing on a functionally complete system. This should provide a sufficient period for ASX and participants to become comfortable with the new system.
 - There will be a number of dress rehearsals and full fail over testing based on a number of scenarios conducted.
 - The process will be similar to that used for the transition to the new futures trading platform.
 - The actual test environment will become the production environment at the cut-over weekend. The same infrastructure, networking and the software will be populated with the migration data on the cut-over weekend.

A member expressed concerns that a large proportion of participants rely on a small number of technology vendors to provide connectivity to the clearing and settlement system and the combination of the need to come to grips with a new technology and the iterative nature of software releases may be problematic for achieving the proposed timeline.

In response it was noted that the vendors are highly engaged through the ISO 20022 Technical Committee and have a high level of understanding of what the new message schemas look like. A majority of third-party vendors have also attended the DAML software training and have DAML software development kits.

The Chair acknowledged that ASX needs to work closely with the vendors between now and when the new platform is completed to mitigate these risks.

The Senior Manager, Equity Post-Trade services provided members with an overview of upcoming stakeholder engagement activities over the next few months.

- On 3 October ASX will host a webinar update which aims to answer some common questions and correct some common misconceptions, particularly with regards to connectivity options. There are currently about 250 people already registered for the webinar.
- A second webinar on 18 October will drill down into the detail for the direct integration option. For example: the application layer versus the platform ledger; the ledger API (its functions, data streaming and query capability); details around nodes as a managed service; and the benefits of taking a node.
- The two webinars are precursors to the connectivity and integration working group that should commence in late-October. Four working group meetings are planned for prior to Christmas, including meetings focussing on:
 - direct integration to node;
 - ISO connectivity messaging using the AMQP protocol over ASX Net;
 - ISO connectivity messaging using SWIFT Net; and
 - the contents of the technical documentation when it is released in December.
- Working group meetings will recommence at the end of January and will deal with some of the other matters outlined in the consultation response document.
- The implementation transition working group will commence its work in the first quarter of next year.
- A number of focus groups will be held on specific system enhancements, starting in late October, focussing on account structures, hierarchies and the standardisation of holder registration details.
- Other focus groups including those covering new settlement instruction features; settlement locks for CHES holdings; and settlement locks for issuer sponsored holdings.
- The first meeting of the corporate action STP working group meeting will kick off in mid-October.

In response to a member's request ASX agreed to provide a calendar of events on its CHES replacement page setting out the upcoming meetings.

b) ISO 20022 Technical Committee Report and Minutes

The ASX Chief Operating Officer reported that there continues to be considerable engagement from those attending the Technical Committee with a lot of constructive feedback received on the suite of messages that will determine the system workflows and how users will interact with the system.

To date the focus has been on the ISO 20022 messages that will deliver existing functions but this is shifting to the messages necessary to support the enhanced features.

The 533 base CHES messages have been reduced to around 450 and these have been mapped to around 89 base ISO messages – a significant efficiency for the messaging protocol. Of those 89 messages around 33 will require an approach to the ISO standards body requesting some form of change request. Given feedback from ASX's partners (SWIFT) we are confident that approval will be forthcoming. There are a further 14 brand new messages that currently don't have an equivalent ISO standard, mainly relating to the way CHES payments are processed. A decision will need to be taken on whether to go through the process of seeking certification for those messages from the standards board or just have like messages in those instances.

The first release of technical documentation will set out a lot of the settlement messaging relating to core functions, including unilateral and bilateral messaging.

There were no questions on the Technical Committee reports.

AGENDA ITEM 4: Administration

a) Minutes from the 5 July 2018 Business Committee Meeting

The minutes of the 5 July 2018 meeting were approved without further change.

b) Forward work program and BC Meeting dates for 2018

The Chair noted that the forward work program focuses on CHES replacement and the Corporate Actions Project but that it remained open to members to suggest any other agenda items.

c) Other matters

There were no other matters raised by members.

Next meeting

The next meeting is scheduled to be held on 29 November 2018.

The meeting closed at 1.30pm.

Signed as a correct record of the meeting.

Chairman

Date

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 3B	
Topic	Forward Work Program
Date	29 November 2018
Purpose of this paper	To update Members on the forward work program of the Business Committee for 2019.

OVERVIEW

It is proposed to have a total of four meetings of the Business Committee over the course of 2019. The proposed Business Committee dates are:

- Thursday, 4 April 2019;
- Thursday, 18 July 2019;
- Thursday, 19 September 2019; and
- Thursday, 28 November 2019.

Subject to any input from members who wish to add additional items, the forward work program of the Business Committee in 2019 will be predominately focused on CHES replacement: technology development, business requirements, and implementation processes.

A second major stream of work will be Corporate Action STP Phase 2. A working group drawing on a range of stakeholders has commenced work and is expected to run until the first half of 2020.

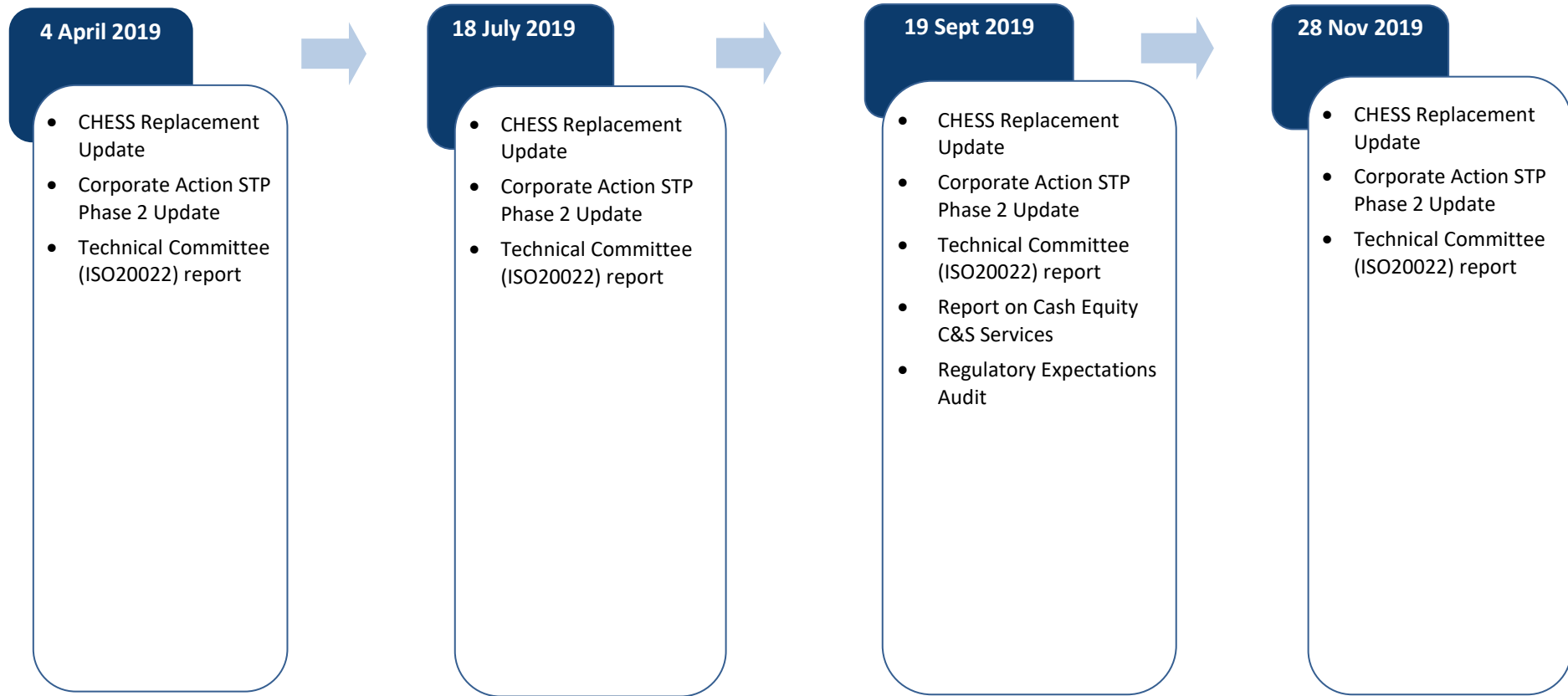
Members of the Business Committee are invited to suggest topics for inclusion in the forward work program at any time by contacting the Business Committee Secretariat.

Meetings of the ISO 20022 Technical Committee are expected to be held every month during 2019. Further information regarding the confirmed dates and agenda for each meeting will be provided iteratively.

ATTACHMENTS

Attachment A – Business Committee Forward Work Program

Attachment A: Business Committee Forward Work Plan



Note: the forward work program does not include the standing agenda items for each meeting.