ISO 20022 Technical Committee Meeting

Tuesday 2 May 2017

ASX

Agenda

Agenda overview

Minutes from last meeting, open actions

CHESS Replacement project update by ASX

ISO 20022 project update by ASX

Update from Business Committee (verbal)

Matters for consideration

    Trial ISO 20022 introductory webinar feedback

    CHESS demand reporting messages

    MyStandards, ISO 20022 usage guideline review (164, 101)

    Overview of the Business Application Header
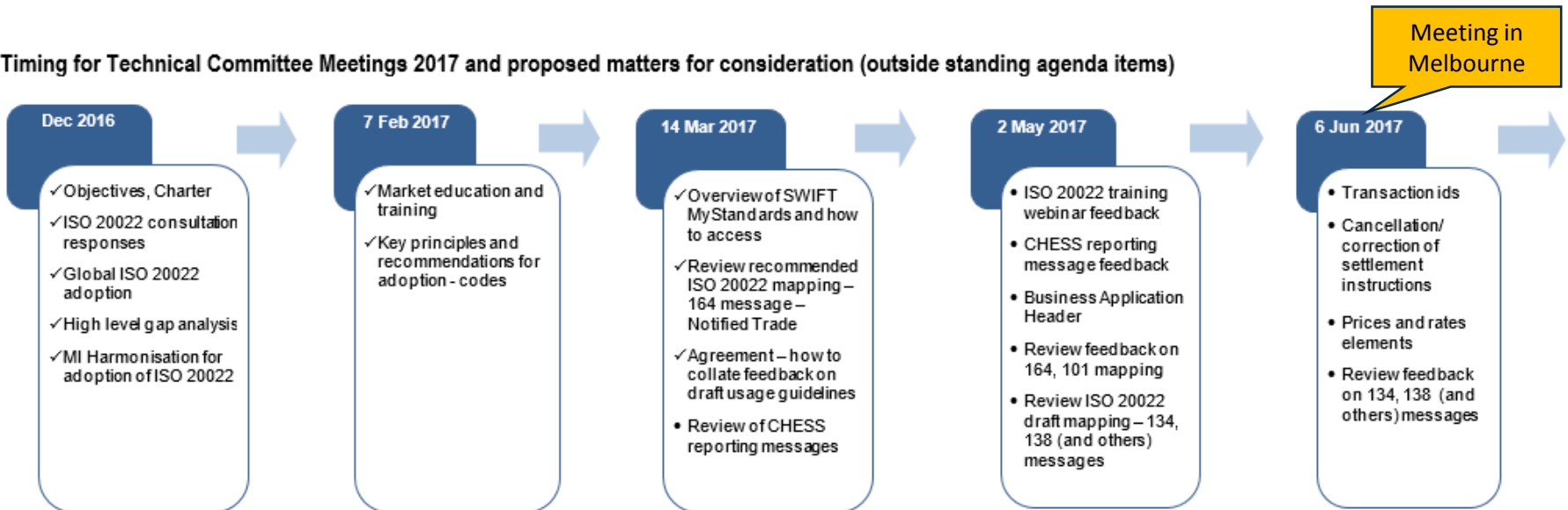
    ISO 20022 case study for message simplification

    ISO 20022 dual entry message usage guidelines

Next meeting

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Forward agenda overview

Theme	Objective	Standing Agenda items
Transitioning to ISO 20022 messaging for Equities Post Trade	ASX working with market stakeholders to ensure best practice adoption and implementation of ISO 20022 for Equities Post Trade	1. Welcome and agenda overview
		2. Minutes from last meeting, actions
		3. CHESS Replacement project update by ASX
		4. Update from Business Committee
		5. ISO 20022 project update by ASX
		6. Matters for consideration

Timing for Technical Committee Meetings 2017 and proposed matters for consideration (outside standing agenda items)

Meeting in Melbourne

Dec 2016
- ✓ Objectives, Charter
- ✓ ISO 20022 consultation responses
- ✓ Global ISO 20022 adoption
- ✓ High level gap analysis
- ✓ MI Harmonisation for adoption of ISO 20022

7 Feb 2017
- ✓ Market education and training
- ✓ Key principles and recommendations for adoption - codes

14 Mar 2017
- ✓ Overview of SWIFT MyStandards and how to access
- ✓ Review recommended ISO 20022 mapping – 164 message – Notified Trade
- ✓ Agreement – how to collate feedback on draft usage guidelines
- • Review of CHESS reporting messages

2 May 2017
- • ISO 20022 training webinar feedback
- • CHESS reporting message feedback
- • Business Application Header
- • Review feedback on 164, 101 mapping
- • Review ISO 20022 draft mapping – 134, 138 (and others) messages

6 Jun 2017
- • Transaction ids
- • Cancellation/ correction of settlement instructions
- • Prices and rates elements
- • Review feedback on 134, 138 (and others) messages

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Minutes and actions

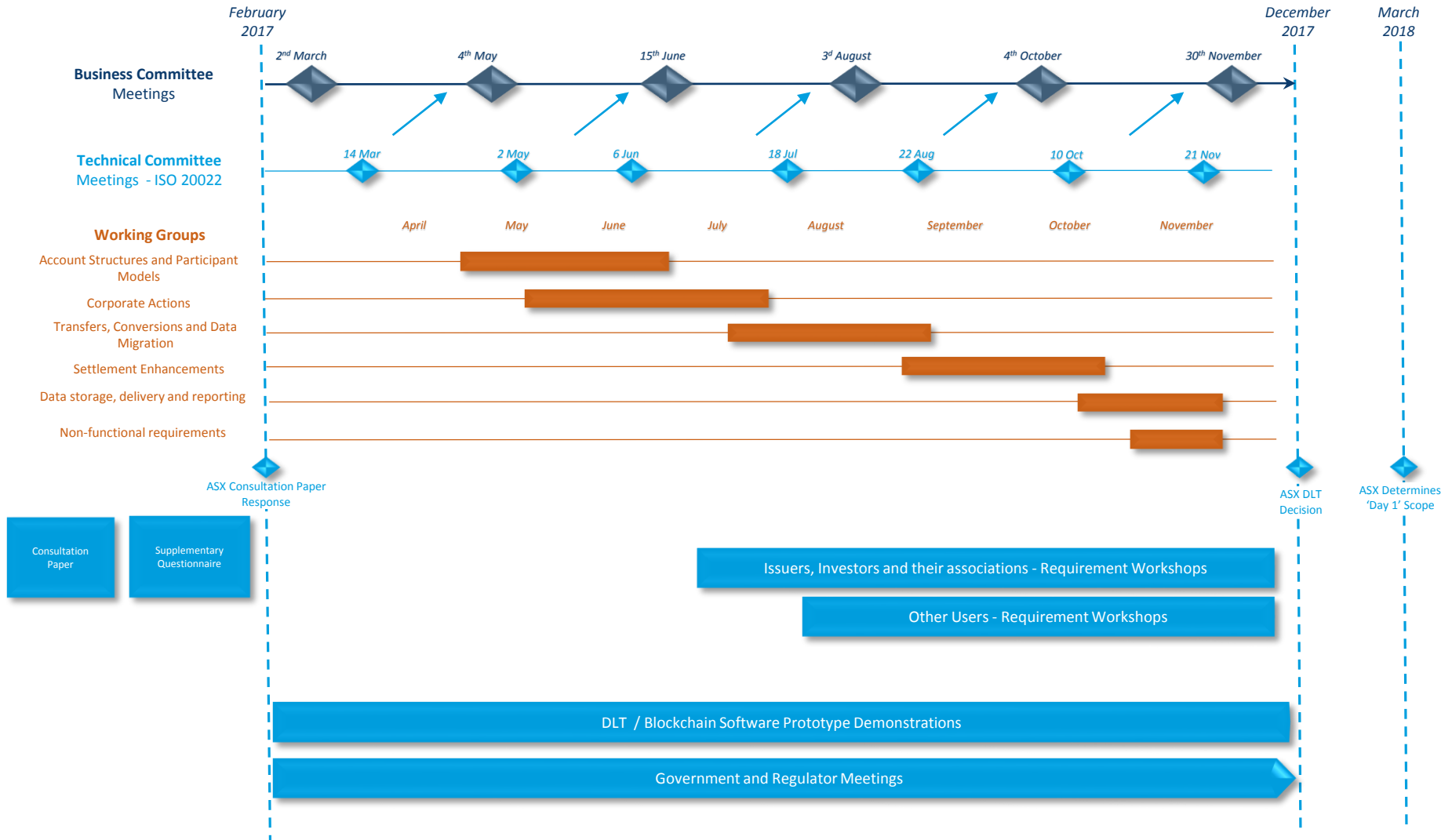Minutes for 14 March 2017 meeting available on CHESS Replacement web page, including all open, closed action items.

Open action items:

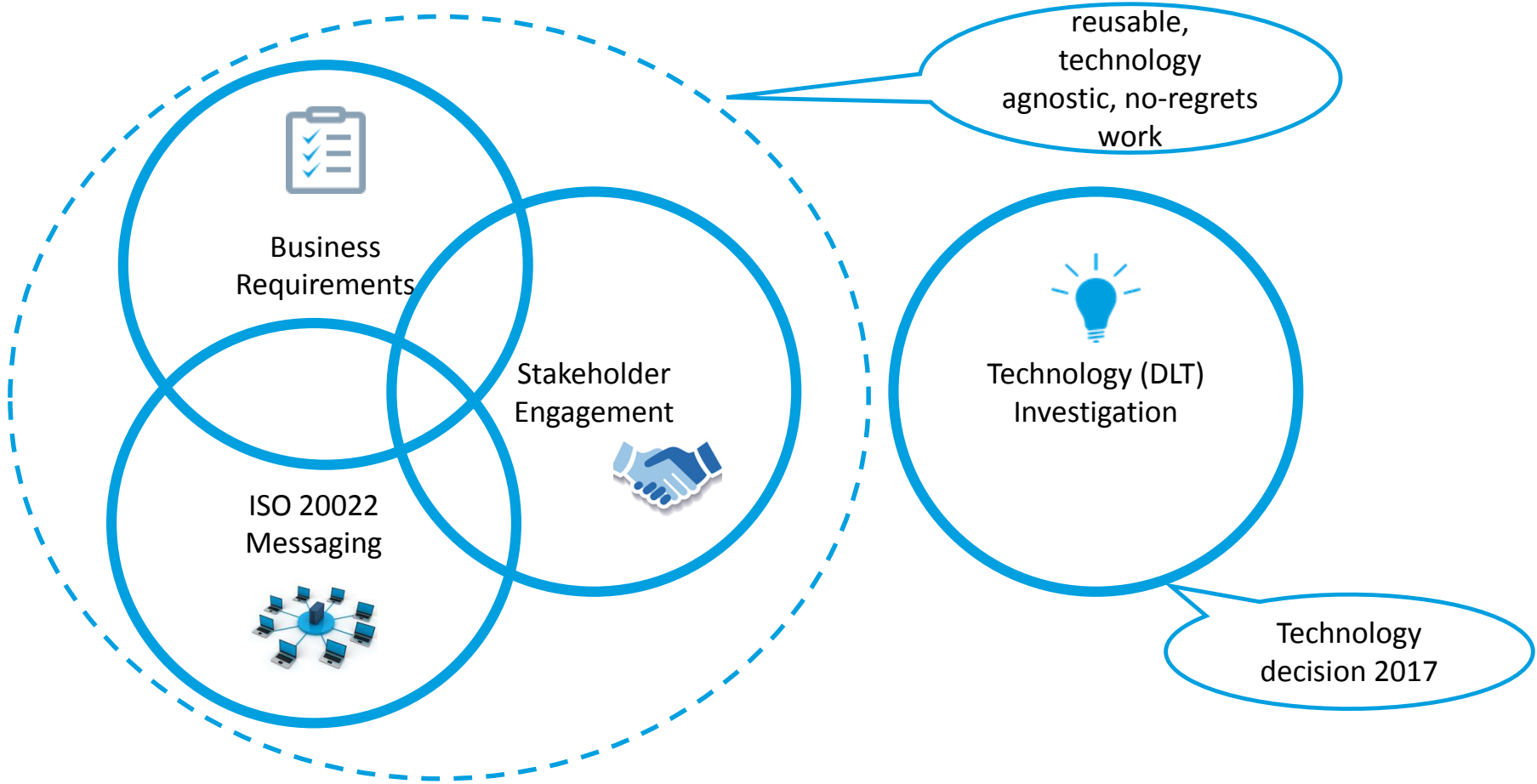| No.	Meeting Date	Open Action Items	Owner	Due Date	Status
10	7 Feb 2017	Market Operators to advise the preferred MIC to be presented in trade related messages as the "Place of Trade".	ASX, Chi-X, NSX, SSX	14 Mar 2017	ASX, SSX responded, Chi-X, NSX outstanding
15	14 Mar 2017	Schedule future agenda item to discuss transition arrangements, including any changed values (e.g. party identifiers).	ASX	2 May 2017	Close? ASX has noted in forward matters for consideration
16	14 Mar 2017	Create register of matters that may impact upstream, downstream systems or processes, including codes, identifiers and ISO 15022.	ASX	2 May 2017	WIP – draft provided to members
17	14 Mar 2017	Provide further information on party identification for issuers – UIC or BIC and proposed process.	ASX	2 May 2017	WIP, updated notes provided to members
18	14 Mar 2017	ASX to draft procedures for change requests to usage guidelines and code lists.	ASX	implementation	Close? Added to Register of upstream/down stream considerations

Register of Upstream/Downstream matters

Matter	Date raised (Technical Committee date)	Action item #?	Status
Adoption of BIC as identifier for participants – mapping and development considerations to other systems, including broker ids on trade.	14 March 2017	Matters Arising 1/Action item 16	
Consideration for backward translation issues. Is there a need to promote any change requests to ISO 15022 so participants can support both ISO 15022 and 20022 in their own operations and systems?	14 March 2017	Matters Arising 2/Action item 16	
Documentation of procedure changes; including procedures for how to request change requests for example to usage guidelines, code lists.	14 March 2017	Matters Arising 4/Action item 18	
Adoption of 4 character codes to identify values (in place of CHESS 2, 3, 4 character codes) – mapping considerations to other systems.	7 February 2017		
Outline post implementation change schedule – e.g. yearly standards reviews and impact on usage guidelines/technical changes; upgrades to latest versions of ISO 20022 messages			

CHESS Replacement project update

CHESS Replacement project update
How we've structured the work…

Business Requirements

Stakeholder Engagement

ISO 20022 Messaging

reusable, technology agnostic, no-regrets work

Technology (DLT) Investigation

Technology decision 2017

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ISO 20022 project update by ASX

- SWIFT standards consultants continue detailed mapping of CHESS EIS messages to ISO 20022 usage guidelines - ~ 70 first drafts delivered to ASX, and iterative subsequent drafts.

- ASX review of high priority draft usage guidelines continues, with preparation for Technical Committee review.

- Continued SWIFT/ASX fine tuning of usage guideline presentation standards (MyStandards), and raising, tracking fine tuning issues with SWIFT to improve functionality and output.

- Preparation for and scheduling of trial training webinar – 27 April 2017.

- Planning for next tranche of work – 2nd half 2017.

Matters for consideration

Trial ISO 20022 introductory webinar feedback

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Trial ISO 20022 introductory webinar - feedback

Trial webinar held 27 April 2017

- 33 attendees from 12 organisations; open Q&A

Feedback from attendees?

- Suitability of the webinar for introduction to ISO 20022, general overview?

- Would you recommend the training to your colleagues?

- What type of audience – e.g.. business, technical, Business Analyst etc.

- The introductory webinar provides a general overview and some discussion on securities settlement and management business area. ASX has the opportunity to design 2 additional webinars with SWIFT. What topics would you like to see in the additional webinars?

- Do you think the webinar format is a good start for industry training and education?

- Proceed with webinars, when?

Introductory webinar agenda items:

- Introduction to ISO 20022
  - ISO 20022 methodology
  - XML basics
  - XML message block structure
  - Extensions
  - ISO 20022 vision for ASX
- ISO 20022 for securities settlement and management
  - Securities business areas
  - Message flows and samples

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CHESS demand reporting messages

Summary of responses to CHESS reporting message questions
Key themes and actions

Themes

- A number of respondents suggested further analysis and discussion was needed before finalising changes.

- Agreement with the ASX proposal to descope reports not used, or to merge reports where it is logical and no/low impact. This is conditional on not losing important information.

- Suggestions for additional or changed reports – either by messaging or other services.

- Evident that users rely on CHESS clean up function of standing reports.

Actions

- Members to provide more affirmative response to potential descope list. More information on reports available in the reporting summary provided, EIS and APG.

- ASX to further analyse the report candidates for merging and estimate impact (e.g. TPB and HSB).

- ASX to continue mapping work on confirmed like for like reports.

- ASX to note responses as input to the Data storage, delivery and reporting working group meetings; including suggestion to consider delivery of static data via API, lookup.

Summary of responses to CHESS reporting message questions

9 organisations responded to the questions:

#	Question
Q1	**Are there any messages that you consider to be reports that are not included in the attached list?**
	All respondents indicated there were no additional reports.
Q2	**Are there any messages in the attached list that you do not consider to be CHESS reports?**
	The majority of respondents agreed with the current list. Further input was provided on takeover reports; and a suggestion that static data (e.g. account details) might be better suited to direct access (e.g. API/online) rather than a report.
Q3	**Have you requested any reports in the past year that are shown as zero usage in the attached list?**
	The majority of respondents had received requested reports.
Q4	**If you have a standing instruction for a report is it typically a) set and forget; or b) actively managed?**
	Respondents confirmed a range of approaches from set and forget to actively managing reports, and this could be dependent on the type of report and circumstances for the request.
Q5	**If you actively manage your report requests, how do you do this?**
	Respondents confirmed the management of report requests via manual, vendor or in house systems. Reports were also managed on a case by case basis for certain events, or per standard procedures.
Q6	**Are there any reporting requests that you are certain your organisation would never use?**
	The majority of respondents confirmed there weren't any reports they were certain they would never use, and that more detail was probably needed to make a fully informed assessment. Some respondents called out particular reports that would never be used – e.g. FGM, FLN, HVM, HRD, OSL (part of descope list).

Summary of responses to CHESS reporting message questions

#	Question
Q7	**Do you agree with ASX's proposed report types to descope from CHESS report availability?**
	The majority of responses agreed with the proposed report types for descope, though with a couple of qualifying statements around the need to further assess whether the information was still needed, and how.
Q8	**If you disagree with ASX's suggested descope, please provide a reason?**
	For the minority of responses that disagreed with the proposed report types for descope, comments included: - conditional on whether HLH would be replaced with something similar - more analysis needed – e.g. TPD, URT, and usage stats; - query how users would verify a standing report request if RPD descoped?
Q9	**A number of report types provide similar lists of returned messages. Would it make sense to combine some of these report types? For example refer to the comment on report type TPB.**
	The majority of respondents agreed with the proposal to merge certain reports, where logical. Comments included: - agree if the effort is minimal for ASX and participants, otherwise not justified; - more analysis needed.
Q10	**Are there any reporting requirements you would like CHESS to provide that aren't currently available? For example, additional information, additional report type.**
	Half the respondents indicated the current reports were sufficient. Other respondents provided suggestions including: - intra-day as well as end of day reports for certain types - more on corporate action instructions, indicators - consideration for reports delivered outside of current messages.

Summary of responses to CHESS reporting message questions

Example of the reporting statistics

Report Type		Report Type Description	Report Type		Message returned by CHESS	Typical Requestor	# active report requests @ 6 Feb 2017	# report requests delivered 1/1/16 – 31/1/17	Proposed Retain or Descope
Demand Report Types and Usage:									
CEB	Cum Entitlement Balance	Returns the number of cum entitlement units allocation to each holder for each corporate action	Balance	504 / 520	Cum Entitlement Daily Balance / Cum Entitlement Balance	C&S Participant, Settlement participant, registry on behalf of issuers	720	4,368	Retain

- 720* CEB reports had an active state within the CHESS system @ start of 6 Feb 2017 (received by end 3 Feb 2017).

- 4,368* CEB reports had a complete** state within CHESS at start of 6 Feb 2017. Full delivery of the report specified on the request had been met which resulted in a change of state from active to completed.

*the # combines standing and one-off requests @ 6 Feb 2017

**the reports were completed before or on 3 Feb 2017

Message #	Message Description	Report ids	# messages delivered 1/1/16 – 31/1/17
520	Cum Entitlement Balance	CEB	25,226,790

Between 1 Jan 2016 and 31 Jan 2017 a total of 25,226,790 messages were generated and sent OUT as a result of CHESS processing an active CEB report request during that period (count per CEB per HIN).
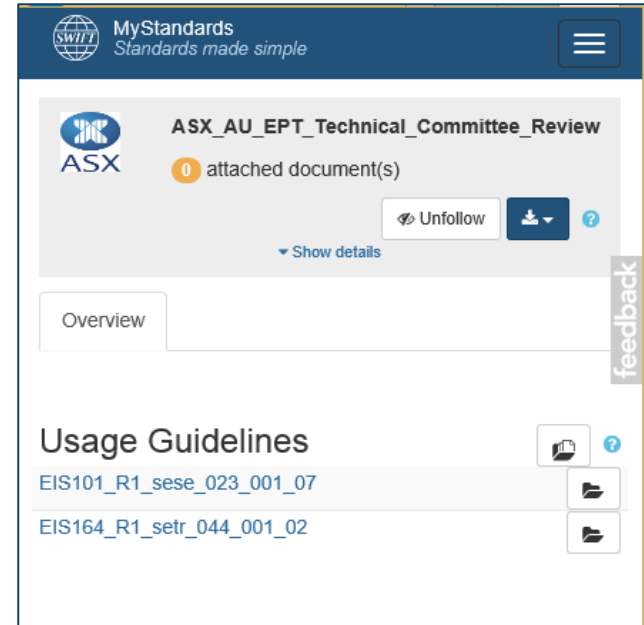
MyStandards
ISO 20022 usage guideline review

MyStandards set up and usage

12 organisations with 20 representatives are now users in MyStandards with access to the CHESS Replacement community

>130 usage guideline views to date by 8 organisations

Open forum re MyStandards experience, limited comments received?

*stats exclude ASX and SWIFT

EIS 164   ISO 20022-equivalent

Field Definitions   setr.044 Document Example

Bit Position	Field Name	Format		Mandatory/ Optional
2	Security Code	12	Character	M
3	Settlement Amount	15	±Numeric, 2 decimal	M
11	Transaction Basis	1	Character	M
12	Settlement Date	8	Numeric	O
13	Trade Date	8	Numeric	M
19	Receiving PID	5	Numeric	M
20	Delivering PID	5	Numeric	M
21	Processing Timestamp	22	Character	M
24	Trade Execution Time	6	Numeric	M
27	Settlement Instruction Status	1	Character	M
38	Override Basis of Movement 1	2	Character	O
39	Override Basis of Movement 2	2	Character	O
40	Override Basis of Movement 3	2	Character	O
41	Override Basis of Movement 4	2	Character	O
42	Override Basis of Movement 5	2	Character	O
48	Transaction Id	16	Character	M
52	Unit Quantity	11	Numeric	M
62	Origin Transaction Id	16	Character	M
94	As At Date	8	Numeric	O
115	Condition Code 1	2	Character	O
116	Condition Code 2	2	Character	O
117	Condition Code 3	2	Character	O
118	Condition Code 4	2	Character	O
119	Condition Code 5	2	Character	O
120	Condition Code 6	2	Character	O
121	Condition Code 7	2	Character	O
122	Condition Code 8	2	Character	O
123	Buyer Id	4	Numeric	M
124	Seller Id	4	Numeric	M
146	Basis of Quotation 1	2	Character	O
147	Basis of Quotation 2	2	Character	O
148	Basis of Quotation 3	2	Character	O
149	Basis of Quotation 4	2	Character	O
150	Basis of Quotation 5	2	Character	O
151	Trade Reason	1	Character	M
210	Novation Indicator	1	Character	M
216	Buyer Order Reference Number	10	Character	O
217	Seller Order Reference Number	10	Character	O

ISO.document SctiesTradConfStsAdvc

```
<TxId>                         {16,16}                  </TxId>
<InstgPtyTxId>                 {16,16}                  </InstgPtyTxId>
<PrcgSts>                      SCHD                     </PrcgSts>
<FinInstrmId>                  CBA                      </FinInstrmId>
<Sd>                           Sell                     </Sd>
<TradTxTp>                     ASXM                     </TradTxTp>
<TradDt>                       2017-02-24T10:54:00      </TradDt>
<SttlmDt>                      2017-02-28               </SttlmDt>
<ConfQty>                      60                       </ConfQty>
<DealPric>                     "AUD" 82.01              </DealPric>
<Buyr>                         7777                     </Buyr>
<Sellr>                        1832                     </Sellr>
<Dpstry>                       XASXAU2S                 </Dpstry>
DlvrgSttlm <Prty1>             1892                     </Pty1>
RcvgSttlm <Prty1>              XASXAU2S                 </Pty1>
<SplmtryData> (optional)
        <Sup:NvtnInd>          true                     <Sup:NvtnInd>
```

Key mapping points
As highlighted in March Technical Committee

1. Data Source Schemes (DSS) with code lists and Issuer of INFO or XASX

Party Trading Details	<PtyTradgDtls>	[0..1]		[1..1]	
Financial Instrument Identification	<FinInstrmId>	[1..1]			Annotation: EIS Message Field Specification - Bit Position: 2 - Field Name: Security Code
ISIN	<ISIN>	[0..1]	text [A-Z0-9]{12,12}	T/C	Type Changed: text [A-Z]{2,2}[A-Z0-9]{9,9}[0-9]{1,1}
Other Identification	<OthrId>	[0..*]		[0..1]	
Identification	<Id>	[1..1]	text{1,35}	T/C	Type Changed: text{3,6}
Type	<Tp>	[1..1]	Choice		
Proprietary	<Prtry>	[1..1]	text{1,35}	T/C	Type Changed: text
INFO			INFO		

2. Additional detail with mapping between EIS Allowable Values and ISO Codes

Proprietary Status	<PrtrySts>	[0..1]		[1..1]	
Proprietary Status	<PrtrySts>	[1..1]			
Identification	<Id>	[1..1]	text [a-zA-Z0-9]{4}	T/C	Annotation: EIS Message Field Specification - Bit Position: 27 - Field Name: Settlement Instruction Status - Size: 1 - Format: C - Cardinality: M - Field Definition: The current status of a settlement instruction.
Committed			CMTD		Annotation: EIS Field Allowable Value - Allowable Value: B - Description: Committed
Issuer	<Issr>	[1..1]	text{1,35}	T/C	Type Changed: text
XASX			XASX		

3. Like fields mapped to same ISO element e.g. Trade Date and Execution Time

4. Unsigned Settlement Amount with Ccy and Credit Debit Indicator (CRDT is +ve)

5. Supplementary Data to complete mapping when no existing element

MyStandards community review
EIS 164 and EIS 101

Comments about usage guideline and/or elements

- Feedback: Override Basis of Movement
  - EIS 101 same 4 Character Codes as EIS 164
  - Future data requirements for OriginOfOrder and Principal/Agent Indicator

Overview of the Business Application Header

ISO 20022 – Business Application Header
Why? What?

Why is it needed? ... Easier and cheaper implementations

- Easy access to operational data

- Data in the payload or users create workarounds

- Overhead, complexity and duplication of cost

What is it? ... A uniform solution for all ISO 20022 messages

- Applicable to the entire message

- Relevant to the business application

- Network independent solution

Business Application Header (BAH)
head.001.001.01

XML Tag	Content
Character set	Contains the character set of the text-based elements used in the Business Message.
From	Sender of the message
To	Recipient of the message
Business message identifier	Unambiguously identifies the business message
Message definition identifier	Message identifier
Business service	Business service agreed between sender and receiver
Creation date	Date and time when the message was created
Copy duplicate	Indicates whether the message is a copy of a previously sent message
Possible duplicate	Indicates the message is possibly a duplicate
Priority	Priority over other messages with assigned priorities
Signature	Digital signature of the authorised Business Entity
Related	BAH of the message to which this messages relates

Securities messages are mandated to use the BAH

More information: https://www.iso20022.org/bah.page

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What's in the BAH?

Full details can be found on the ISO 20022 website www.iso20022.org, but the key data is:

XML Tag	Content
From	the organisation that sent the message (with a wide choice of formats)
To	the organisation that should receive the message
Business message identifier	a unique identifier for this particular message instance, as defined by the sending application or system
Message definition identifier	the identity of the message definition, as published on the ISO 20022 website
Creation date	the creation date (and time) for the data in the BAH
Copy duplicate / Possible duplicate	fields to aid the identification of duplicate data
Priority	the priority of the data within the message
Signature	the digital signature of the sending organisation
Related	information about another, related message

Business Message

An ISO 20022 Message together with its Business Application Header forms a Business Message.

```
<AppHdr>
    …
</AppHdr>
```
Business Application Header

```
<Document>
    …



</Document>
```
ISO 20022 Message

Business message

BAH Key Elements
- Business Sender
- Business Recipient
- Message Instance Identifier
- Business Service
- Copy Indicator
- Related Reference
- Signature
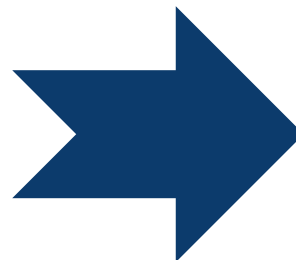
Benefits for CHESS Replacement
- Standardised ISO 20022 Header
- Support current and future CHESS approach
- Easy business routing and referencing
- Embedded security with digital signature
- Support of copy / duplicate
- Reference to related message

Use of the BAH Business Service element

```
<AppHdr>
    <BizSvc>
</AppHdr>
```

Business Application Header

```
<Document>
    …



</Document>
```

ISO 20022
Message

Business message

Business Service
- Used for routing purpose and identification of business lines
- Defined as a free text of 35 characters field
- No ISO 20022 guidelines / recommendation on usage / implementation
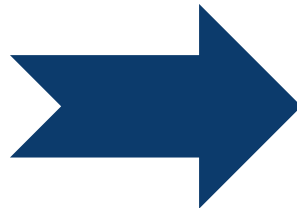
Recommended best practice to identify:
- the MI as root element
- the business line
- the version for the business line
- differentiation between pilot, test and live environments

Examples: "xasx.colr.v01!test"
                   "xasx.secl.v02" (Live v2)

ISO 20022 BAH information

MUG   Message Usage Guide
MDR   Message Definition Report

Available at: https://www.iso20022.org/bah.page

CHESS Replacement BAH
MyStandards view

		Min	Max	Restrictions
☐ View only restricted elements	☐ Hide removed elements			
search message (min 2 chars) 🔍 ✖	☐ Show xml tags			
∨ ✉ Business Application Header V01 (head.001.001.01)				⬇⚠
⟩ ⊐ Character Set		0	1	⊘
⟩ ⊐ From		1	1	⬇⚠
⟩ ⊐ To		1	1	⬇⚠
⊙ Business Message Identifier		1	1	⚠
⊙ Message Definition Identifier		1	1	⚠
⊙ Business Service		0	1	⚠ [!]
⊙ Creation Date		1	1	⚠
⟩ ⊐ Copy Duplicate		0	1	⊘
⊙ Possible Duplicate		0	1	⊘
⟩ ⊐ Priority		0	1	
⟩ ⊙ Signature		0	1	[!]
⟩ ⊙ Related		0	1	⚠ ⬇⚠
☑ CrossElementComplexRule : RelatedPresentWhenCopyDupl				⊘

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CHESS Replacement BAH
BAH with unique Transaction ID

- BAH mandatory (for Securities domain, recommended by SEG for other Business Areas)

  - From & To Party Identification.
    Currently UIC becoming connected/unconnected BIC

  - BizMsgIdr includes "//Business Date"

  - BizSvc used to identify scenarios (convention TBC)

  - Creation Date format is "Zulu" not local i.e. UTC

- Mapping to <Related> BizMsgIdr element

  - Typically EIS.Origin Transaction Id

  - Copy to BAH of related message

- BizMsgIdr Tx Id to be Unique.

  - Some New Tx Ids will be added in ISO versions (typically outbound messages such as EIS134, 138)

Example BAH for EIS164

*Example BAH Related for EIS102*

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ISO 20022
Case study for message simplification

ASX

Consolidate trade netting messages?
Similar messages grouped within one .xml

~ 30% of CHESS volumes > 300 million Messages p.a.

- Participant receives an EIS 138 "Netted Trade" to notify that: an EIS 164 "Trade Notification" has been netted and replaced for settlement by the EIS 134 "Net Obligation"

- An EIS 138 for every trade in the 'netting pool' of the EIS 134.

- Only difference between each EIS138 is Target Transaction Id!
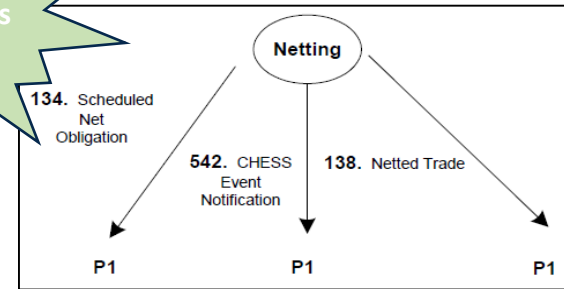
138-01

Bit Position	Field Name	Format		Mandatory/ Optional
21	Processing Timestamp	22	Character	M
48	Transaction Id	16	Character	M
49	Target Transaction Id	16	Character	M
62	Origin Transaction Id	16	Character	M

ISO.secl.010 allows Target Txn Ids to be listed in same message if element defines as occurs [1..*]

| 1	Supplementary Data	<SplmtryData>	[0..*]		[1..1]	
1	Target Transaction Identification	<TrgtTxId>	[1..1]	text{1,16}	A	Annotation: EIS Message Field Specification - Bit Position: 49 - Field Name: Target Transaction Id

Q: Would consolidating like EIS 138 messages into the same secl.010 message …

1. Create efficiencies (message volume, exception handling, business process) and/or
2. Additional Costs from Business Processes linked to current model?

Rationalise netting-generated messages?
Related Messages for same Participant can be collapsed

- Both EIS134 and EIS138's are generated at the same time, for the same participant and map to the secl.010

- It is possible to map both EIS134 and EIS138 fields onto the one secl.010 Usage Guideline
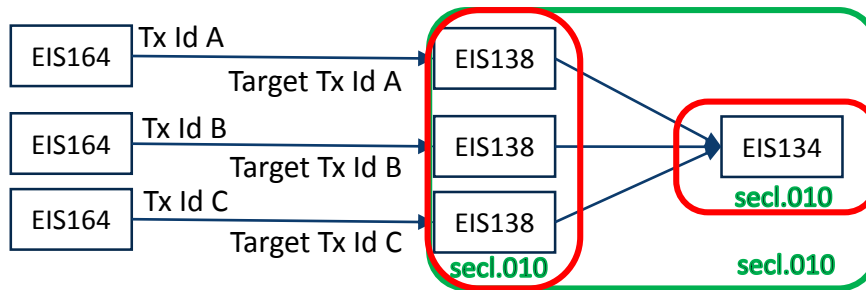
- Fewer Usage Guidelines, Fewer Messaging Events, Less Development & Testing

-> a real benefit of standardizing on XML-based ISO-standard financial messages!

Q: Would rationalising related EIS134 and EIS138 messages into the same secl.010 …

a) Create efficiencies (message volume, exception handling, business process); and/or

b) Additional Costs from Business Processes linked to current model?

134-01

Bit Position	Field Name	Format		Mandatory/Optional
2	Security Code	12	Character	M
3	Settlement Amount	15	±Numeric, 2 decimal	M
12	Settlement Date	8	Numeric	M
19	Receiving PID	5	Numeric	M
20	Delivering PID	5	Numeric	M
21	Processing Timestamp	22	Character	M
48	Transaction Id	16	Character	M
52	Unit Quantity	11	Numeric	M
57	Total Message Count	11	Numeric	M
62	Origin Transaction Id	16	Character	M

138-01

Bit Position	Field Name	Format		Mandatory/Optional
21	Processing Timestamp	22	Character	M
48	Transaction Id	16	Character	M
49	Target Transaction Id	16	Character	M
62	Origin Transaction Id	16	Character	M

ISO 20022
Dual-entry message
usage guidelines

ASX

Mapping bilateral business event
EIS 101 dual-entry request thru to EIS 166 Scheduled Settlement Instruction
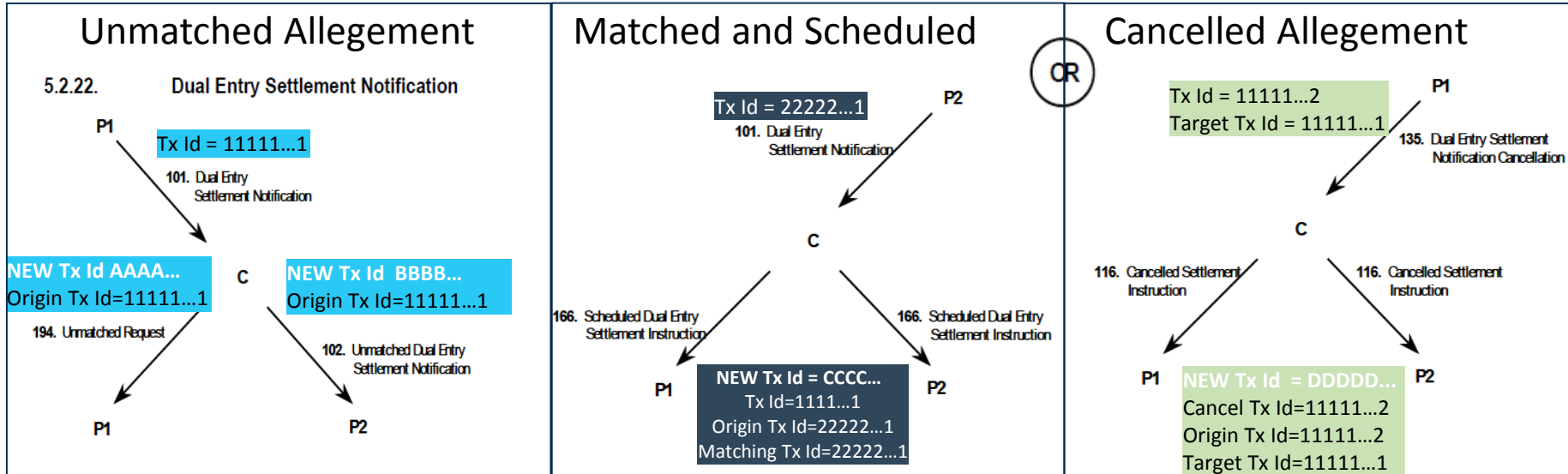
- DRAFT Usage Guidelines in Technical Committee MyStandards Community

EIS Message	101	102	194	166	135	116
ISO Message	sese.023	sese.028	sese.024	sese.024	sese.020	sese.027

- ASX welcomes feedback by 26th of May on:

  1. general mapping from EIS messages
  2. New mandatory Data required by ISO base schemas
  3. Introduction of NEW Tx Ids when not unique

Next meeting

- Noted actions from this meeting

  - Review of BAH, ISO 20022 draft usage guidelines for EIS 134, 138, 102, 194, 166, 135, 116 by members by 26 May 2017, comments in MyStandards

- Draft minutes from this meeting will be distributed for review

- Next meeting to be held on Tuesday 6 June 2017, 3pm (2 hours):

  - Melbourne meeting room @ NAB offices, details to be confirmed
  - Review feedback - ISO 20022 mapping – messages in MyStandards
  - Matters for consideration:
    - Review feedback on usage guidelines
    - Cancellation/correction of settlement instructions
    - Overview of Transaction ids
    - Overview of prices and rates elements in ISO 20022

- More information on CHESS Replacement & Technical Committee documents:

  http://www.asx.com.au/services/chess-replacement.htm

  Or email ASX project team: CHESSReplacement@asx.com.au

Thank you