Future Management of SEM Central Market Systems (CMS)

25th November 2015

Agenda

- Introductions
- Topic 1: Central Market Systems Roadmap
- Topic 2: Relevant Operational Timelines and Constraints
- Q&A

Workshop Objectives

- Inform SEM stakeholders of CMS Roadmap options under consideration:
  - Maintenance (Limited Changes: Break=Fix)
  - Upgrade (Pro-active upgrade of systems and software)

- Outline current operational constraints that:
  - May influence Roadmap
  - Will determine the operational longevity of the CMS

- Discuss next steps

Topic 1
Central Market Systems Roadmap

Roadmap: Operational Context

- Current Regulatory target date for I-SEM delivery is Q4 2017.

- Any extension of target I-SEM go-live will increase the longevity of the current CMS, impacting the systems Roadmap.

- Current vendor release agreement (bi-annual releases) expires after May 2016 release.

- Current CMS are now nearing what is the industry standard "best-practise" refresh window, i.e. 5 year cycle:
  - Hardware replacement
  - Third-party software upgrades

- Currently under the Code the CMS would remain active until Q4 2018/Q1 2019 (3 years) to support M+13 resettlement.

Roadmap: Key Assumptions

- There will be no scheduled releases to the current CMS after the May 2016 bi-annual release (SEM R2.8.0).

- Technical updates and data archival activities will continue

- Change Control mechanisms (Mods Committee, SEM Design Service) will remain in place to support ad-hoc releases if required.

- I-SEM will be supported by a new suite of systems requiring significant stakeholder build commitment.

- The SEM and I-SEM will run in parallel as required until the Regulatory approved Resettlement window expires.

Roadmap Options

- A number of paths explored with vendors resulting in two viable options

- Costs and Risks associated with each viable option:

  - Maintenance (Limited Changes: Break=Fix)

    Vs

  - Upgrade (Pro-active upgrade of systems and software)

Central Market Systems (CMS) Roadmap

Option 1: Maintenance Mode

Maintenance Mode: Main Points

- Minimise change (ideally a "change freeze"), including
  - Vendor platform & business applications
  - 3rd party software components (remain on IE8 and current version of Java etc)

- Extend hardware warranties where possible; proactive replacement of certain components

- This mode would accept that SEMO will not follow industry standard refresh policy

- Risk Mitigation Strategies
  - Proactive replacement of some components e.g. SAN disks, RAID Controller batteries etc. to mitigate mean time before failure by replacing ahead of time
  - Upgrade of critical network components to strengthen CMS perimeter.
  - Independent risk assessment recently completed by third party resulting in a number of minor recommendations which SEMO will act upon. Annual re-assessment will continue.
  - CMS availability target range of 99.8 to 99.5 may need to be revised – currently we are consistently operating above KPI levels.
  - CMS Change freeze would assist in minimising risk.

Central Market Systems (CMS) Roadmap

Option 2: Upgrade Mode

Upgrade Mode: Main Points

- In the absence of I-SEM, the upgrade option would be implemented regardless (industry standard is circa 4-5 years)
- Upgrade as hardware warranty options no longer available
- Upgrade 3rd party (IE, Java etc) software as it becomes end of life (EOL)
- Dependencies between 3rd party products means a large programme of change (similar to Intra Day Trading (IDT) – approx 12 to 15 months)

- Additional cost to the Market and Participants
- Will result in stakeholder interface impact: MPI (Participants); TSO-IA and MDP Interfaces
- Requires significant stakeholder "end to end" testing (including Market Trial) of upgraded SEM in parallel with I-SEM delivery
- UUC Solver Re-Certification required
- Tipping Point : Upgrade V Maintenance - Cost Benefit
    - Upgrade likely to take 12-15 months to deliver, at best Q2 2017 if approved now. Target delivery of I-SEM Q4 2017

Key Considerations - Roadmap

Stakeholders should consider the following (in conjunction with relevant IT, Security etc. colleagues) what each roadmap option means for their organisation:

- Maintenance mode – Existing application and desktop software to remain in place (e.g. Java 6 and IE 8) until market end; Security workarounds.
- Upgrade Mode – Resources required in each organisation to deliver parallel projects (major market SEM upgrade and I-SEM)
- Cost - return on investment? Delivery of upgrade Q2 2017 earliest-Target delivery of I-SEM Q4 2017
- Other programmes of work e.g. I-SEM, REMIT etc?
- Stakeholders should assess the business benefit to their own organisation.

Key considerations

	Upgrade	Maintenance
Security	Upgrade to Java 8	Remain on Java 6
Application and desktop software stack	Upgrade to IE11	Remain on IE8
Resources	Business as usual + I-SEM + major CMS upgrade (12-15 month delivery) • Major end to end parallel Testing including Market Trial for upgrade; • Interfaces impacted: MPI (Participants); TSO-IA and MDP Interfaces;	Business as usual + I-SEM
Cost/Return on Investment	Participant costs (development, testing, resources); Market Operator costs (Major capital outlay)	Extend warranties as available, proactive replacement of consumable items
Risks	Reputational; Return on investment; Resources.	Reputational; Market outage; Security; Deviating from best practice refresh policy.
General	Large capital outlay, life cycle limited to one year. SEM upgrade delivery Q2 2017 (assuming capital approval Q1 2016), Target I-SEM delivery Q4 2017. No additional functionality/capability delivered from upgrade.	Minimal capital outlay, scarce industry resources concentrated on I-SEM and other key projects.

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Topic 1: Roadmap - Next Steps

1. By December 7th : Stakeholders to submit feedback to SEMO via the Market Helpdesk on preferred Roadmap approach.

2. By December 18th : SEMO to share feedback and propose a preferred approach to the Regulatory Authorities.

3. Q1 2016:
   - Regulatory Authorities to consider feedback
   - SEMO to host follow on conference call with all Stakeholders setting out the way forward as per Regulatory decision

Topic 2

Relevant Operational Timelines and Constraints

Topic 2: Context

- Constraints that will influence the longevity (and possibly Roadmap) of the CMS, e.g.:
  - Resettlement: M+4, M+13, Ad-hoc
  - Formal query window that may result in a Re-price event: M+13
  - Formal Dispute window of 2 years

- Will result in a significant period of parallel SEM and I-SEM operations.
  - Parallel operation, support and maintenance of two very different markets for up to 2 years – all stakeholders impacted, not just SEMO.

- Cost of Support and Maintenance of systems that are to be de-commissioned

Key Questions – Transition

- Resettlement timelines: Currently M+4 & M+13. Is there justification to reduce this timeline, e.g. to M+1 & M+4?

- Formal dispute window (currently 2 years) which may trigger a re-price event. Is there justification to reduce this timeline?

- Formal query window (M+13) which may trigger a re-price event. Is there justification to reduce this timeline?

→ SEMO to share feedback with the RAs and I-SEM Market Rules workstream / Modifications Committee.

Topic 1: Central Market Systems Roadmap

Topic 2: Relevant Operational Timelines and Constraints