

Latest Developments on CORENET X

4 Sept 2025

















Overview

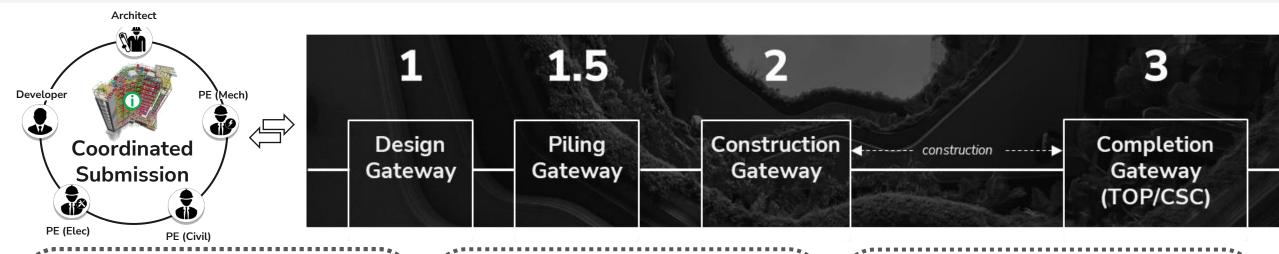
01	Recap of the CORENET X Co-creation Journey
02	Review of Agency Processes and Requirements
03	CORENET X Good Practices Guidebook & Key Insights from Live Projects
04	Industry Support and Resources

RECAP OF THE CORENET X CO-CREATION JOURNEY

(<u>Link</u> to the introduction video on the CORENET X website)

New Regulatory Approval Process for Building Works (RABW)

Co-creation journey to redesign and streamline the regulatory processes into 3 main gateways





"Get your project done faster and spend less – no more running around or repeated works."

GET ONE-STOP APPROVAL

"Get all your approval in one go, instead of chasing different agencies separately."

BUILD WITH CONFIDENCE & CERTAINTY

"Know exactly what you can build before you start, avoiding expensive changes later."

Coordinated Response

Agencies will collectively review submissions and provide deconflicted response.

2

Iterations per Gateway

Good quality submissions should be able to obtain clearances within 2 Written Directions.



Working Days Response Time

For joint submissions, whereby agencies will collaborate to respond within 20 working days.

CORENET X Implementation Timeline

CORENET X is being introduced in phases to facilitate industry transition



REVIEW OF AGENCY PROCESSES AND REQUIREMENTS

Based on observations from live submissions and industry feedback, agencies have been reviewing the regulatory processes and requirements to achieve a **balance** between:

- What is **practical** for project team to provide upstream, e.g. details on M&E design
- What is critical to ensure compliance at each of the submission gateways
- The **impact on industry**, e.g. critical milestones for commencement of works, launch of sales, etc.

① Design
Gateway (DG)

1.5 Piling Gateway (PG)

② Construction Gateway (CG)

Independent Submissions ③ Occupancy Permit/ Stat. Completion

Critical Design Parameters

"Showstoppers, non-negotiables"

Foundation Requirements

"Commencement before piling and foundation works"

Permit to
 Commence
 Works (piling)

Detailed Design Requirements

"Must-haves before Launch of Sales"

- **Written Permission**
- Building Plan Approval

All Other Requirements

Independent requirements without co-dependencies across agencies

Compliance to Approved Design & Statutory Completion

PRACTICALITY & CLARITY OF CX CODE OF PRACTICE (COP)

Industry Feedback

Difficulty in providing operational details at DG/CG without builders onboard

Agencies are reviewing the submission requirements in the COP:

(3rd edition to be published before 1 Oct 2025)

- The **level of details** required at DG and CG will be calibrated to an appropriate level, taking into consideration general industry practices and agency reviews.
- Clearer guidelines will be provided on what can be submitted in 2D vs 3D.
- More guidance will be provided on BIM modelling.

PART STRUCTURAL (ST) SUBMISSIONS [BCA]

Industry Feedback

Difficulty in providing full structural details of the entire development altogether

BCA has reviewed to allow Part ST Submissions for qualifying large projects:

- Full coordinated structural BIM carcass model to be submitted at the 1st CG submission.
- **Detailed structural submissions** (including calculations, AC/ACO report, etc.) can be submitted subsequently in parts 1st part in CG and remaining parts as independent submission after CG.

CLEARANCE OF EXTERNAL WORKS [LTA, NPARKS & PUB]

Industry Feedback

Delay in clearance of the main development due to external works

Agencies have reviewed and aligned the processing of external works:

• Project teams can **submit details of external works separately after CG**, if required, with the condition that interfacing details between the external works and main development have been finalised and cleared at CG.

TRAFFIC IMPACT ASSESSMENT (TIA) [LTA]

Industry Feedback

Delay in commencement of piling due to TIA process prior to DG submission

LTA has implemented a 2-stage approach for TIA clearance:

(Circular released on 7 Mar 25):

- Part 1 (pre-DG): requirements with **direct impact to development**, e.g. access arrangements, pick-up-drop-off, traffic management.
- Part 2 (pre-CG): requirements with impact beyond development, e.g. traffic analysis for junctions that do not affect the boundary, demand management.

DESIGN ADVISORY PANEL (DAP) PROCESS [URA]

Industry Feedback

Project timeline affected by the DAP process

URA has calibrated the process and requirements for **DAP**:

- Architect can develop design details progressively with greater certainty:
 - Pre-DG DAP + (Stage 1): Firm up the key design parameters
 - Pre-CG DAP + (Stage 2) : Review **detailed design**, submitted prior to CG

ENERGY EFFICIENCY OPPORTUNITY ASSESSMENTS (EEOA) [NEA]

Industry Feedback

Project timeline affected by EEOA report submissions

NEA has reviewed to allow progressive submission of **EEOA** reports:

- **EEOA-NV lite report** to be submitted and cleared **prior to DG clearance**.
- **EEOA-NV full report** to be submitted and cleared **prior to CG clearance**, and conditional CG approval may be issued for incomplete reports where justifications are provided.

PERFORMANCE-BASED FIRE ENGINEERING PROPOSALS [SCDF]

Industry Feedback

Project timeline affected by the need for clearance of performance-based fire engineering proposals prior to CG submission

SCDF has reviewed to allow a more flexible for Fire Engineering Design Brief (FEDB):

- FEDB can be submitted concurrently at CG.
- CG clearance will be issued together with in-principle approval for FEDB, on condition that related fire safety works only proceed when relevant clearances are obtained.

PNEUMATIC WASTE CONVEYANCE SYSTEM (PWCS) SPECIALIST DETAILS [NEA]

Observations from projects

Impractical to furnish
PWCS specialist details
as they may not be
onboarded at CG

NEA will consider granting conditional approval through QP declaration:

- If details are not worked out at DG, **QP to confirm in writing** that proposed spatial dimensions can accommodate installation of PWCS and to be in compliance with SS 642:2019.
- If details are not worked out at CG, **QP to declare compliance** to SS 642:2019 and follow up with details no more than 6 months following CG clearance.

NAMING OF FACILITIES AND SPACES [URA]

Observations from projects

Need for WP and BP amendment submission to align with the facility/space names in marketing materials

URA has simplified the regulatory process:

- Project teams will not need to amend WP/approved BP to reflect different names of facilities or spaces shown in marketing materials provided to purchasers, so long as homebuyers' interests are not affected.
- Developers should provide a list specifying the names shown in the approved plans vs names in the marketing materials, for ease of understanding for purchasers.

CLEARANCES IN THE CRITICAL PATH OF SALES LAUNCH [URA, IRAS, BCA]

Observations from projects

Dependencies in clearances done sequentially affected by CX workflows

Agencies are recalibrating relevant regulatory processes to better align with the CX workflow:

- IRAS: Certification of Numbering (House/Unit address)
- BCA: Share Value
- URA/COH: Sales and Purchase Agreements and Show Unit

GOOD PRACTICES GUIDEBOOK & KEY INSIGHTS FROM LIVE PROJECTS

CORENET X Good Practices Guidebook



Compilation of best practices and key learning points to share with industry practitioners the potential areas to look out for, common pitfalls to avoid and recommended good practices

4 Simple Steps to Get Ready for CORENET X!

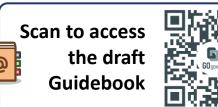
- Stay up to date by joining our **CORENET X** mailing list
- Prime yourself with CORENET X Training for RABW and IFC+SG

Dive into our self-help resources to unravel details of CORENET X

- New Submission Process
- CORENET X Submission Portal
- CORENET X Code of Practice
- BIM Submission in IFC+SG Format
- [Draft] CORENET X Good Practices Guidebook

Scan to provide feedback for

We appreciate your feedback for the draft Good Practices Guide, and will take into consideration the valid suggestions for the final version to be published.



Guidebool





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NEW MINDSET AND PRACTICES



- New regulatory process under CX is a major shift from today's fragmented process to coordinated submission and agency review.
- Proper upfront planning and coordination is the key to fully capture the benefits of CX.



PITFALLS

- Some developer continued to work based on old mindset and practice – allocating little time for upfront design and coordination, leading to rushed and low quality submissions.
- Frequent changes leading to reworks by QPs.
- Late onboarding of contractors, and contractors' inputs led to additional resubmissions or amendment downstream.



RECOMMENDATIONS

- Timeline should be agreed upon by the entire project team, and a realistic timeframe should be allowed for design development and coordination, accounting for potential revision cycles and pre-submission consultations/ waivers.
- Key milestones for design freeze should be established and aligned across the project team.
- Early builder engagement is important if design input is required from the builder.

PROJECT COLLABORATION



- The new regulatory process requires **collaboration and communication among the various stakeholders**.
- Designs should be consolidated and well-coordinated.



- Designs are still largely done in silos and there is limited collaboration among QPs over design changes as well as the potential impacts resulted from such changes.
- For some projects, there is a lack of consensus over who is leading the overall coordination.



- Coordinating roles to lead the design and overall project coordination and the scope of work for each project member should be clearly defined.
- Collaboration should be viewed as a collective responsibility among all project parties.

CX AND BIM READINESS



- The new regulatory process aligns the level of details of each agency at key milestones.
- Coordinated BIM submission requires collaboration across various disciplines and
 OpenBIM format (IFC+SG) ensures interoperability across the different authoring software.



PITFALLS

- Some project teams are unfamiliar of the level of details needed at each submission milestone, leading to incomplete submissions.
- Gaps observed between different disciplines, e.g.
 - Submission models are incorrectly georeferenced.
 - Naming and height of building storeys are inconsistent across blocks/ disciplines.



RECOMMENDATIONS

- QPs should familiarize with CX process and stay engaged with the BIM team to ensure models reflect the design intent and comply with agency requirements.
- Quality checks should be conducted prior to submission.
- BIM teams of various building disciplines should jointly plan the modelling workflows aligned with IFC+SG, with a centralised standard and shared reference file for consistency.

SUBMISSION QUALITY



- The **CX Code of Practice (COP)** was introduced to help industry practitioners in preparing multi-agency regulatory submissions across the key submission gateways.
- Clear communication is essential during the submission process.



PITFALLS

- Some projects did not model according to the CX COP and agencies' review could not be conducted effectively.
- For resubmission Some QPs were unclear in their resubmissions on how the revisions addressed agencies' WD comments, which led to additional iterations. Example:
 - Submission indicated 'complied with' against all WD items without explanation.
 - Submission indicated 'Pls refer to attached' when there are hundreds of attachments submitted.



RECOMMENDATIONS

- QPs should familiarize with CX COP and ensure submissions are prepared in accordance with the COP.
- For resubmission Clear communication is important and QP should indicate actions taken to address the comments. If there is a need to refer to additional documents, indicate clearly the document name.
- Clarity works both ways to avoid miscommunication and hence eliminate unnecessary iterations.

INDUSTRY SUPPORT AND RESOURCES

Internal checklist for firms

People

- ✓ Building a CORENET X core team
- equip CORENET X experts as "go-to" persons
- ✓ Manage the change and evaluate effectiveness of the training plan – track KPIs
- ✓ Plan for the manpower and resources needed – support the changes

Process

- ✓ Understand the RABW process & Agencies' requirements
 - Attend RABW training
 - Study the Code of Practice
 - Make a voluntary submission
 - Map the new RABW into internal workflows & conduct impact assessment

Technology

- ✓ Ensure system readiness
 - Attend IFC+SG training, create and map internal templates to meet IFC+SG requirements
 - Familiarise with the Submission Portal Training Environment

Trainings and Resources for Industry

CX Training and Courses

CX Regulatory Approval for Building Works (RABW) Course

Understanding the new RABW Processes

Preparing OpenBIM submissions using IFC+SG

Scan to find out more on CX training and courses:



CX Code of Practice (COP)



Recommended procedures and good practices to help industry practitioners in preparing multi-agency regulatory submissions across the key submission gateways in CORENET X.

Scan to access the latest version of CX COP (2nd ed.):



CX Website and Resources

- Interactive COP
- Submission Portal Guides
- IFC+SG Resources
- Training and Funding
- Past Events and Materials
- Circulars
- List of firms that have onboarded CX NEW!





CORENET X Training Environment (for Simulated Hands-on) NEW



Training environment replicates the CORENET X Submission Portal



Allowing industry users to explore the Submission Portal's interface, functions and submission forms without an actual project.

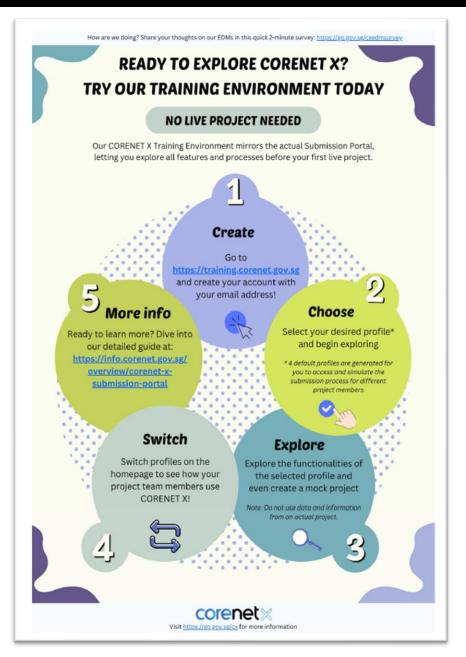


Training guide to help industry navigate the simulation environment (click <u>here</u> to access the training guide)

Scan to access the CX training environment:







CORENET X Helpdesk, Clinic and FAQ

To provide troubleshooting channels and FAQ resources for industry support and reference



CX Clinic - Dedicated Platform for CORENET X Consultations

- Platform to provide support for CORENET X and RABW queries
- Address project-specific submission and regulatory requirements
- Deliver hands-on guidance in partnership with BIM training providers



CX Helpdesk - Specialised Technical Support for Issue Resolution

- Serve as first point of contact for industry users
- o To provide frontline support, address queries, issues and feedback from industry
- Diagnose and resolve technical problems and track issues through to completion



FAQ - For Immediate Solutions and Quick Reference

- Updated regularly with latest CORENET X information and developments
- o Enable quick access to standard solutions and resolution guidance
- Serve as comprehensive knowledge repository for industry

Thank you!