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NEC Forum 8 - 2026

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 **Thursday, 20th August**
4 pm - 6 pm SAST

 **Topic: NEC4 Option X10**
Information Modelling

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NEC Forum 6 - 2026

NEC4 Option X10 Information Modelling

Contractual information management before the BIM capability demonstration.

X10 focus: requirements • responsibilities • submissions • handover

NEC4 Option X10

Information Modelling

Presented by:
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The simple idea

X10 is an information management clause, not just a BIM clause.

X10 makes digital project information part of the contract.

- defines what information must be created or updated
- allocates responsibilities between information providers
- requires an Information Execution Plan to manage delivery
- helps the Client receive usable information at handover

Key message: model + data + process + responsibility

Source basis: NEC guidance notes, ICE BIM article and NEC practice notes on NEC4 X10.



Where X10 fits before the BIM demo

This presentation covers the contractual X10 obligations. The live BIM demonstration follows afterwards.

This presentation covers

X10 contractual duties, Scope requirements and administration.

The BIM expert will cover

Technical capability, model navigation and practical BIM use.

Training boundary

We explain the obligation before showing the technology.

Practical message for X10

- X10 is not software training.
- X10 turns required project information into a contract deliverable.
- The demo will show what BIM can do once the obligation is clear.

X10 works best when the Scope defines usable information and the Project Manager administers submissions consistently.

Source: ICE Inside Infrastructure, “Why Better Information Means Better Outcomes”, 8 June 2026.

Why NEC4 needed X10

Modern projects rely on shared digital information.

Traditional contract thinking

Drawings, specifications and documents are exchanged as separate deliverables.

Modern project reality

Design, construction and operation depend on integrated digital information.

X10 response

Make information modelling a defined, administered and auditable contractual process.

Without X10, parties can easily disagree about “what BIM meant”.

- What exactly must be delivered?
- When is it due?
- Who checks and accepts it?
- Can the Client use it after completion?

Secondary Option X10 – Information Modelling

OPTION X10: INFORMATION MODELLING

Defined terms

X10

- X10.1** (1) The Information Execution Plan is the *information execution plan* or is the latest Information Execution Plan accepted by the *Project Manager*. The latest Information Execution Plan accepted by the *Project Manager* supersedes the previous Information Execution Plan.
- (2) Project Information is information provided by the *Contractor* which is used to create or change the Information Model.
- (3) The Information Model is the electronic integration of Project Information and similar information provided by the *Client* and other Information Providers and is in the form stated in the Information Model Requirements.
- (4) The Information Model Requirements are the requirements identified in the Scope for creating or changing the Information Model.
- (5) Information Providers are the people or organisations who contribute to the Information Model and are identified in the Information Model Requirements.

Collaboration

X10.2

The *Contractor* collaborates with other Information Providers as stated in the Information Model Requirements.

Early warning

X10.3

The *Contractor* and the *Project Manager* give an early warning by notifying the other as soon as either becomes aware of any matter which could adversely affect the creation or use of the Information Model.

Information Execution Plan

X10.4

- (1) If an Information Execution Plan is not identified in the Contract Data, the *Contractor* submits a first Information Execution Plan to the *Project Manager* for acceptance within the period stated in the Contract Data.
- (2) Within two weeks of the *Contractor* submitting an Information Execution Plan for acceptance, the *Project Manager* notifies the *Contractor* of the acceptance of the Information Execution Plan or the reasons for not accepting it. A reason for not accepting an Information Execution Plan is that

- it does not comply with the Information Model Requirements or
- it does not allow the *Contractor* to Provide the Works.

If the *Project Manager* does not notify acceptance or non-acceptance within the time allowed, the *Contractor* may notify the *Project Manager* of that failure. If the failure continues for a further one week after the *Contractor's* notification, it is treated as acceptance by the *Project Manager* of the Information Execution Plan.

(3) The *Contractor* submits a revised Information Execution Plan to the *Project Manager* for acceptance

- within the *period for reply* after the *Project Manager* has instructed it to and
- when the *Contractor* chooses to.

(4) The *Contractor* provides the Project Information in the form stated in the Information Model Requirements and in accordance with the accepted Information Execution Plan.

Compensation events

X10.5

If the Information Execution Plan is altered by a compensation event, the *Contractor* includes the alterations to the Information Execution Plan in the quotation for the compensation event.

Use of the Information Model

X10.6

The *Client* owns the Information Model and the *Contractor's* rights over Project Information except as stated otherwise in the Information Model Requirements. The *Contractor* obtains from a Subcontractor equivalent rights for the *Client* over information prepared by the Subcontractor. The *Contractor* provides to the *Client* the documents which transfer these rights to the *Client*.

Liability

X10.7

(1) The following are *Client's* liabilities.

- A fault in the Information Model not caused by a Defect in the Project Information.
- A fault in information provided by Information Providers other than the *Contractor*.

(2) The *Contractor* is not liable for a Defect in the Project Information unless it failed to provide the Project Information using the skill and care normally used by professionals providing information similar to the Project Information.

(3) The *Contractor* provides insurance for claims made against it arising out of its failure to provide the Project Information using the skill and care normally used by professionals providing information similar to the Project Information. The minimum amount of this insurance is as stated in the Contract Data. This insurance provides cover from the *starting date* until the end of the period stated in the Contract Data.

Defined terms added by X10

X10 works only when the Information Model Requirements are clearly identified in the contract.

Information Execution Plan

The plan identified in the Contract Data, or the latest plan accepted by the Project Manager. The latest accepted plan supersedes the previous one.

Project Information

Information provided by the Contractor which is used to create or change the Information Model.

Practical point: vague Scope wording such as “provide BIM” is not enough to administer X10.

Source basis: NEC4 X10 commentary on Information Model, Information Model Requirements and Information Providers.

Identified terms: complete these in the Scope

X10 works only when the Information Model Requirements are clearly identified in the contract.

Information Model

The electronic integration of Project Information with other information provided by the Client and other Information Providers.

Information Model Requirements

The requirements identified in the Scope for creating or changing the Information Model.

Information Providers

The people or organisations who contribute to the Information Model.

Practical point: vague Scope wording such as “provide BIM” is not enough to administer X10.

Source basis: NEC4 X10 commentary on Information Model, Information Model Requirements and Information Providers.

X10 clause map

Each clause converts information modelling into a contract administration control point.



Contracting message: X10 plugs into Scope, Contract Data, early warnings, compensation events and handover rights — it is not a separate software process.

Source basis: NEC4 ECC Option X10 clause headings.

The two key documents

One document says what is required; the other says how it will be delivered.

Information Model Requirements

The Client's requirements

WHAT

- required information
- formats and standards
- level of detail
- delivery dates
- handover data

Information Execution Plan

The Contractor's delivery plan

HOW

- responsibilities
- agreed information platform
- review workflow
- coordination method
- update process

must align

If these are vague, X10 becomes difficult to administer.

Who does what?

X10 works only when information responsibilities are allocated clearly.

Client / Employer

Defines the information it requires.

Project Manager

Administers submissions, acceptance and change.

Contractor

Provides and updates the model and plan.

Information Providers

Designers, subcontractors, suppliers and specialists.

The risk is not the model itself.

The risk is unclear accountability for the information inside it.



How X10 operates during the project

Think of it as a live information workflow.

**1. Define
requirements**

**2. Submit
execution plan**

**3. Create / update
model**

**4. Review and
coordinate**

**5. Handover
usable data**

Practical administration points

- The plan should be submitted and accepted early.
- The model should be updated when the project changes.
- The programme and information deliverables should be aligned.
- Acceptance should not be confused with taking design responsibility.

X10 administration: practical control points

Keep the focus on what X10 requires the parties to define, submit, update and accept.

What the Scope should control

Required information

what model, data, drawings and handover records must be provided

Responsibilities

which information providers produce, check and update each part

Submission rules

when information is submitted, reviewed, revised and handed over

Scope should state

- required information
- format and timing
- review and acceptance process

Project Manager should check

- compliance with the Scope
- alignment with the accepted IEP
- whether any change is a CE

Source basis: NEC practice notes and guidance on NEC4 X10 Information Modelling.

What the Contractor must manage

X10 adds a practical information management obligation.

Deliverables Provide the Information Model / Project Information required by the Scope.

Plan Submit, update and follow the accepted Information Execution Plan.

Coordination Coordinate information from designers, subcontractors and suppliers.

Quality Use agreed standards, formats, naming conventions and review checks.

Handover Ensure the final information is usable by the Client after completion.

Presentation line: X10 creates a deliverable, a process and a discipline.

Changes: when information becomes a CE

If the Scope changes, the information obligations may also change.

Original requirement

Basic coordinated design model and standard handover data.

Client later asks

Detailed asset model with full maintenance data, tags and O&M links.

NEC response

Assess whether this is a change to Scope with time / cost impact.

Important distinction

- If the information was already required, the Contractor must provide it.
- If the Client adds new or more detailed information requirements, it may be a change.
- The effect should be assessed through the normal NEC compensation event process.

Ownership, use and liability

The model has value, so rights and responsibility matter.

1 Ownership

The Client owns the Information Model under X10, unless the contract is amended.

2 Use

The Client needs rights to use project information for operation, maintenance and future works.

3 Responsibility

Each information provider should remain responsible for the information it provides.

Practical warning

- Check whether X10 has been amended by Z clauses.
- Check whether IP rights, reliance and use of data are aligned with the rest of the contract.
- Do not assume the model is reliable for every purpose unless the Scope says so.

Note: NEC guidance confirms X10.6 states that the Client owns the Information Model; project amendments may alter this position.

Common shortfalls and risks

Most X10 problems come from poor drafting rather than poor technology.

Vague requirements

“Provide BIM” is not enough.

No delivery plan

Information Execution Plan is missing or generic.

Unclear roles

Designers, suppliers and subcontractors are not mapped.

Wrong formats

Client receives data it cannot use.

Late changes

Extra data requests are not treated as Scope changes.

Handover gap

Model looks impressive but is not useful operationally.

Good X10 administration starts at tender stage.

Simple project example

Hospital project: from design coordination to operating asset.



- Client requires a model showing layout, services, equipment, asset tags and maintenance data.
- Contractor submits an Information Execution Plan setting out software, roles, dates and reviews.
- Specialists provide plant data, warranties, O&M data and commissioning information.
- At completion, the Client receives usable digital information for operation and maintenance.

The value of X10 is that these expectations are defined before disputes arise.

Closing takeaway

How to explain X10 in one sentence.

X10 turns digital project information into a contractual deliverable.

Scope first

Define the information requirement clearly.

Plan second

Use the Information Execution Plan to manage delivery.

Administer continuously

Update the model and plan as the project changes.

Protect the Client

Make sure handover information is usable.

Final line: X10 is not a technology clause; it is a discipline for managing trusted project information.

**Thank
you**