

NEC X options: Collaborative approach

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Andrew Wooldridge-Irving and Alex Tolson with the final article in a series on NEC X options

REMINDER: Where any X options are planned to be included, they should be expressly indicated as such in contract data part 1. Furthermore, many X options also require supplementary information to be populated in either contract data or the scope, or both, to facilitate the effective operation of the procedure. Where this task is not undertaken, it may lead to complications in administering the contract.

In our initial article, entitled 'NEC 'X' options - introduction', we noted that the X options cover a wide variety of different topics, which makes it difficult to accurately categorise them. For the purposes of this series of articles we organised each X option according to what we considered to be the dominant theme, which for this final article in the series is 'collaborative approach'.

This theme has been associated with the following X options:

X10 - Information modelling - ECC, ECS, PSC, PSS, TSC, TSS, FMC, FMS, SC, DBOC, ALC

X12 - Multiparty collaboration - ECC, ECS, PSC, PSS, TSC, TSS, FMC, FMS, SC

X22 - Early contractor (alliance) involvement - ECC, ALC

To provide a definition, a 'collaborative approach' may be defined as two or more people or organisations working together to achieve a specific outcome. This definition could also refer to co-operation, although a primary difference between these is that collaboration embraces the 'how' part of working together, whereas co-operation is focussed more on the 'why' aspect. The above X options are examined in further detail below.

Information modelling - X10

This is commonly referred to as building information modelling (BIM). A more accurate description could be asset information modelling, although this doesn't describe the entire process, which could be referred to as management of asset information modelling. BIM is essentially an evolution from paper-based 2D technical drawings to an interactive and intelligent computerised 3D model of the asset, which spans the entire lifecycle of a project and effectively creates a digital twin.

Option X10 comprises seven separate sub-clauses, with minor variances between many of the forms mostly relating to the different parties and named roles. The DBOC and ALC forms are different to the others as the contracts operate on a contrasting basis whereby the supplier assumes broad responsibility for the information model, not as an identified contributor to the process.

There are five additional defined terms, which are information execution plan, project information, information model, information model requirements and information providers. The conceptual basis of this option is that all relevant contracts will have option X10 added with the corresponding supplier being an information provider. Project information is produced by each of these, in accordance with the information model requirements stated in the scope, with the associated project information integrated into the information model. Option X10 contains an express requirement for the supplier to collaborate with other information providers. Collaborate is not expressly defined although particular requirements should be stated in the information model requirements, which should detail the level of required collaboration and with whom.

Note that under the PSC and PSS forms professional indemnity insurance is not an Option X10 requirement as this is already included in the insurance table. There are also some minor changes to the TSS form which were made with the October 2020 amendments, that effectively provides consistency with the other NEC contracts. Finally, there appears to be a drafting error with the DBOC form in that it refers to 'information requirements' which should presumably be 'information model requirements'.

There are numerous issues to consider with an information model, especially where the process involves several participants. From a practical perspective data is important in terms of hosting, storage, security, exchange and interoperability. There are also legal issues such as intellectual property rights, liabilities and contractual relationships. Furthermore, it may also be sensible to adopt a BIM protocol, which was the subject of NEC practice note 2 published in April 2018.

Multiparty collaboration - X12

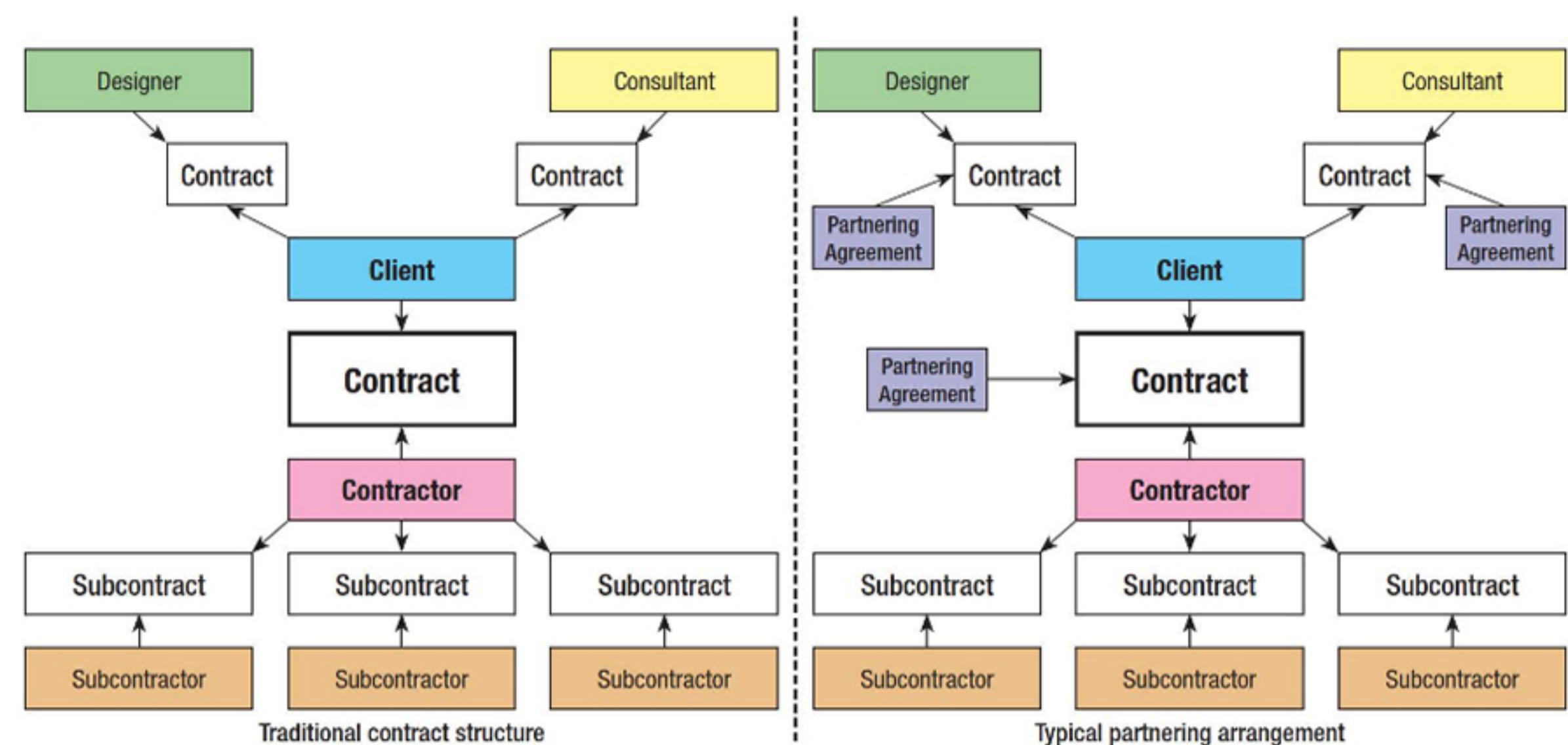


Figure 1: Option X12 operating as a 'bolt on' agreement.

In many industries the need to build effective relationships to facilitate a successful project outcome is a normal expectation, although by contrast the chaotic influence of a dysfunctional group is far too commonly accepted as 'normal' within the construction industry. Over the years there has been an increasing level of dissatisfaction regarding the adversarial and inefficient environment in which construction projects are undertaken, as highlighted in many industry reports, including Banwell (1964), Wood (1975), Latham (1994), Egan (1998) and Farmer (2016).

A model which asserts to overcome the identified shortcomings is that of relational contracting, which is an arrangement that comprises a collaborative structure, including partnering whereby specific project participants become a member of a partnering team. An NEC partnering option was originally published in June 2001 and identified as option X12. The content of the option was derived from the Construction Industry Council publication Guide to Project Team Partnering published in June 2000, as revised in 2002. This was included as an option in NEC3 contracts in 2005 as X12 partnering and re-named as multiparty collaboration with NEC4 in 2017.

Option X12 introduces several additional defined terms which identify the associated roles and an incentive mechanism. A partner is identified by the inclusion of option X12 within their contract with a core group made up of selected partners and authorised to take decisions on behalf of all partners. Key performance indicators (KPIs) are included, although, in contrast with option X20, under this option the KPIs operate at a collective level between the partners rather than at specific contract level.

Essentially option X12 operates as a 'bolt on' agreement, shown in Figure 1. As can be seen, option X12 does not change the contractual arrangement but essentially 'adds' partnering obligations, associated procedures and incentivisation measures that intend to achieve the stated objectives, which may be described as a contractual collaboration. As with option X10 there is an express requirement to collaborate, although the requirement is high level and relates collectively to the partners achieving the promotor's objectives.

Option X12 comprises four separate sub-clauses, with minor variances between the forms mostly relating to the different parties and named roles. It is noted, however, that there are inconsistencies with the wording within the ECS, TSS and SC forms, due to mistakes in drafting, incorrect use of terms and also where the changes made to the option under NEC4 have not been diligently applied.

Early contractor (alliance) involvement (ECI) - X22

This is where a supplier is formally engaged with the pre-construction stage of a project to assist with the development. A primary intention is to address construction risks at the earliest possible time to reduce the amount of expensive scope changes being made during the construction phase. This approach also allows improved integration between the design and construction phases, with other associated benefits, including earlier procurement of long lead items.

This procurement model is usually based upon a two-stage approach, with stage one dealing with the pre-construction phase and the supplier selected to participate based on selection criteria that focusses on competence and capability. The 'supplier' is involved with developing the design to produce a compliant solution within the purchaser's budget. This aims to establish collaborative working relationships, where the parties commence work to achieve a common goal without being influenced by commercial pressures.

There is a break point at the end of stage one where the 'purchaser' decides on how they wish to proceed, which may depend upon the supplier's performance, budgetary constraints or external consents. Where a decision is made to proceed, the 'supplier' delivers the construction works under stage two with associated incentivisation measures.

NEC initially published an additional ECI clause in 2015 for use with the NEC3 ECC form, with minor updates in 2016, adopting the model produced by the Highways Agency in the early 2000's. Option X22 under NEC4 was substantially the same except for some 'use of material' requirements being excluded, which was now addressed by option X9. Note that for the ECC form option X22 is only used with main options C and E.

As the ALC form operates based on a different contractual arrangement, there are notable differences with the option between the forms, although the principal intent is the same. Option X22 for both the ECC and ALC forms was subject to minor, but important, revisions with the October 2020 amendments.

Points to note

The principal arrangement with all these options is based on a 'contractual collaboration'.

Where the principle of 'relational contracting' is extended to encompass both a contractual and organisational structure, this effectively becomes an integrated alliance, which applies where the NEC ALC form is used. The contract structure with this form is shown in Figure 2.

To facilitate the adoption of collaborative working, the International Organisation for Standardisation has published the ISO 44000 series of international standards.

These enable organisations to combine both systems and processes with the appropriate culture and behaviours to facilitate successful collaboration.

Simply bringing people and organisations together, however, doesn't guarantee a successful outcome, even with a collaborative partnering arrangement, as the main ingredient for effective collaboration is the attitudes and approach of individuals, especially at senior management level who should 'lead by example'.

Even with a collaborative partnering arrangement, the main ingredient for effective collaboration is the attitudes and approach of individuals.

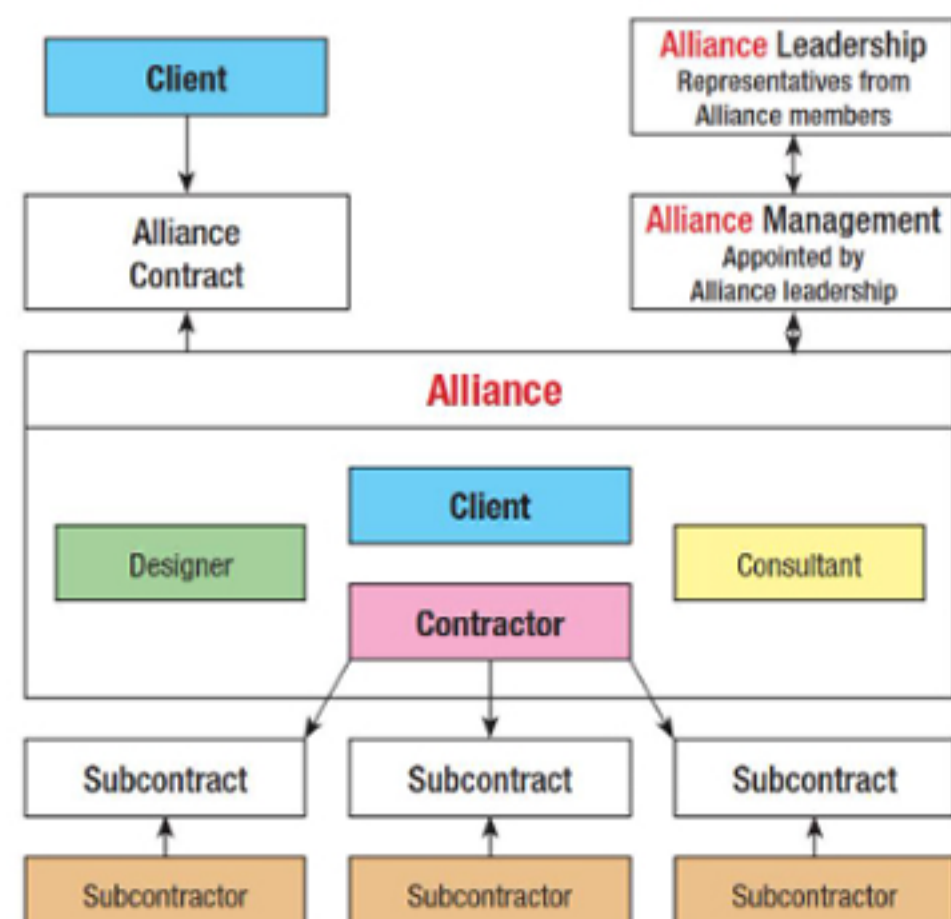


Figure 2: The Alliance structure.