

# **ice-sa NEC Forum**

**Including Jam Session 9**

**Thursday 10th October 2024**  
**4 pm – 5:30 pm**

**FREE**

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**Improving SA Infrastructure  
using NEC Contracts as intended**

**CPD  
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## **NEC Jam Session 9**

**Presented by Mile Sofijanic from  
ECS Associates**

### **TOPIC:**

- **Pre-award documentation**
- **Developing a contract**
- **Key differences between the NEC3 & NEC4**

# 10 NEC Jam Sessions Topics

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## Session 1

Introduction to the NEC3 family of contracts; How it came about, what it tries to do and how it is used; Synopsis of each of the 12 contracts in the family.

## Session 2

Procurement & contract strategies; Parties and role players; Getting the best out of the NEC contract - change of the culture.

## Session 3

Introduction to the sections of Core Clauses & actions in ECC3,  
Section 1 – General.

## Session 4

Section 2 - *Contractor's* main responsibilities,  
Section 3 – Time.

## Session 5

Section 4 - Testing & Defects (Quality),  
Risk Management.

## Session 6

Alignment between contracting Parties,  
Diversity and Inclusion.

## Session 7

Section 5 - Payment, Cost and the Options,  
Section 6 - Change management through compensation.

## Session 8

Section 7 - Title,  
Section 8 - Risks and insurance,  
Section 9 - Termination,  
Disputes and Adjudication.

## Session 9

Pre-award documentation & Developing a contract.

## Combined with

## Session 10

NEC3 and NEC4 – the differences.

# Objectives of 10 NEC Jam Sessions

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- Delegates should leave with
  - an understanding of the NEC philosophy, its associated culture change and how it contributes to the effective management of a project;
  - a basic understanding of how to prepare, tender to, and administer the ECC3 (Engineering and Construction Contract)

# Introduction to ECS ice-sa

## Collaborative Project Strategies©

ECS Associates  
Empowered Contract and Project Management Services



[www.ecs.co.za](http://www.ecs.co.za)

## Facts and Values

A leading, fully-empowered organisation.  
35% black woman owned. BBBEE Level1



3 decades of experience in South Africa and overseas

Delivery of international best practice professional contract and project management services from front end studies to implementation

Business solutions through a combination of expert knowledge and hands on experience

Drive clients' success through collaborative, mutually beneficial contract and business management practices

**Collaborative Project Strategies©**  
Agile Project Delivery

Our Founder Andrew Baird was a key member of the drafting committee for NEC 1, 2 & 3

Our associate Peter Higgins is chairman of the drafting committee for NEC4

Network based business model – low overhead cost  
(Network 1000+)

**I**ntegrity

**P**rofessionalism

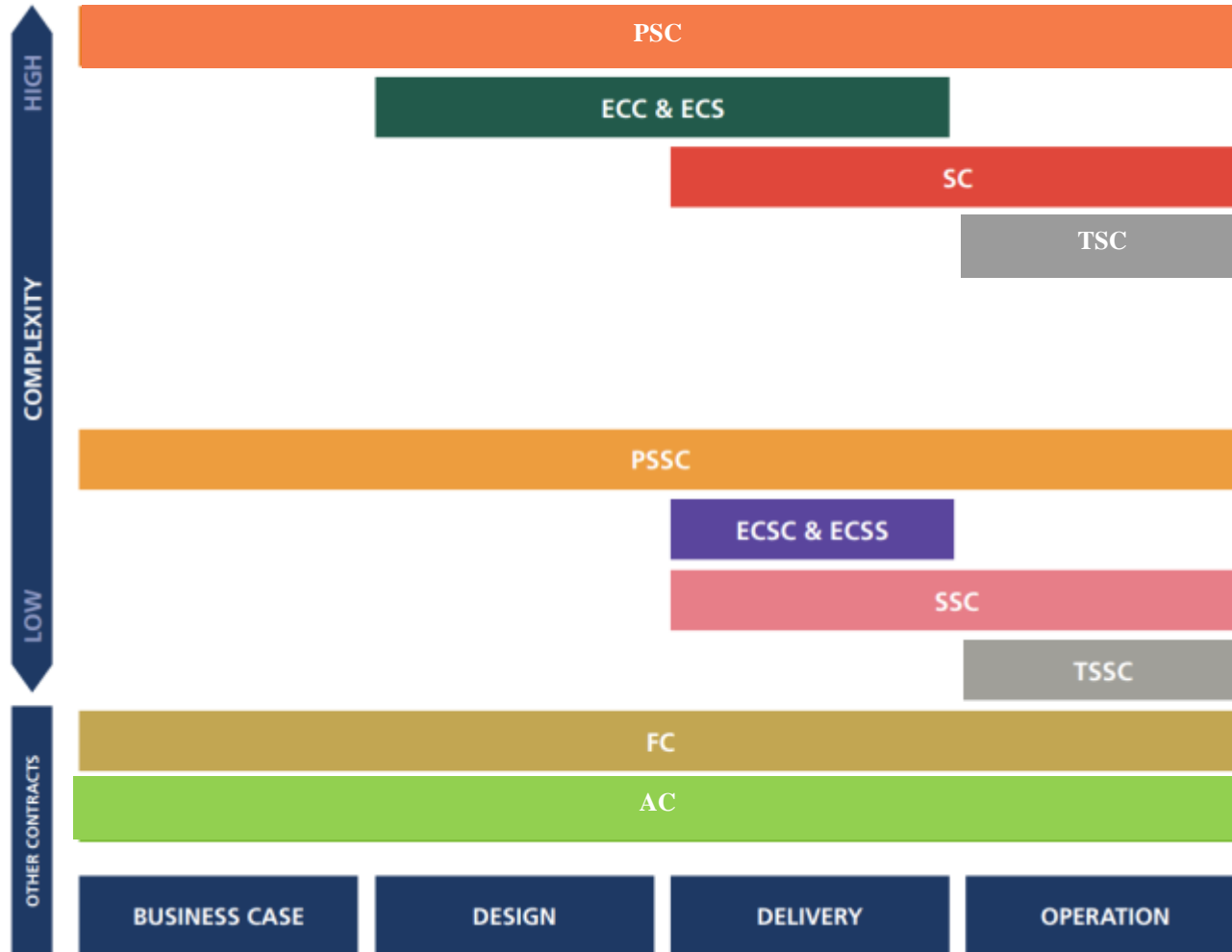
**C**ollaboration

**C**ourage

# Reflection on the previous sessions

- Flexibility
- Clarity and simplicity
- Stimulus to good management
  - The most important objective; every procedure is designed to contribute to rather than detract from the effectiveness for all parties
    - foresight applied collaboratively mitigates problems and shrinks risk
    - clear division of function and responsibility helps accountability and motivates people

# Contracts in NEC3 family <sup>ice-sa</sup>



## Procurement Strategies

- How to split project in smaller components if required?
- Who does Engineering, Procurement and Construction?
- Who is managing interfaces?

## Contract Strategies

- Allocation of risk and incentive
- Choosing the right Options through selection of Main and Secondary Options

**Best practice**: Use the NEC contract with no or minimum changes where required through Z clauses

# NEC is the route to partnering

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## Moving industry culture



Traditional  
Adversarialism

NEC



Mature  
Partnering

- **Section 1 – General**

- |   |                         |
|---|-------------------------|
| • <b>Actions</b>  | <b>Clause 10 (10.1)</b> |
| • <b>Identified and defined terms</b>                         | <b>Clause 11</b>        |
| • <b>Interpretation and the law</b>                           | <b>Clause 12</b>        |
| • <b>Communications</b>                                       | <b>Clause 13</b>        |
| • <b>The <i>Project Manager</i> and the <i>Supervisor</i></b> | <b>Clause 14</b>        |
| • <b>Adding to the Working Areas</b>                          | <b>Clause 15</b>        |
| • <b>Early warning</b>  | <b>Clause 16</b>        |
| • <b>Ambiguities and inconsistencies</b>                      | <b>Clause 17</b>        |
| • <b>Illegal and impossible requirements</b>                  | <b>Clause 18</b>        |
| • <b>Prevention</b>   | <b>Clause 19</b>        |

- **Section 2 - Contractor's main responsibilities**
  - **Providing the Works** **Clause 20 (20.1)**
  - **The Contractor's design** **Clause 21**
  - **Using the Contractor's design** **Clause 22**
  - **Design of Equipment** **Clause 23**
  - **People** **Clause 24**
  - **Working with the *Employer* and Others** **Clause 25**
  - **Subcontracting** **Clause 26**
  - **Other responsibilities** **Clause 27**

- **Section 3 – Time**

- |  |           |
|--|-----------|
| • Starting, Completion and Key Dates       | Clause 30 |
| • The programme                            | Clause 31 |
| • Revising the programme                   | Clause 32 |
| • Access to and use of the Site            | Clause 33 |
| • Instruction to stop or not to start work | Clause 34 |
| • Take over                                | Clause 35 |
| • Acceleration                             | Clause 36 |

- **Section 4 – Testing and Defects**
  - **Tests and inspections** **Clause 40**
  - **Testing and inspection before delivery** **Clause 41**
  - **Searching for and notifying Defects** **Clause 42**
  - **Correcting Defects** **Clause 43**
  - **Accepting Defects** **Clause 44**
  - **Uncorrected Defects** **Clause 45**

# Risk Management Options

## Step 1 (Trigger!)

Choose Risk Management Approach

Consequence 1  
Drivers/ Incentives

Consequence 2  
Values

Consequence 3  
Outcome

## Avoid Risk

Traditional (Rigid) contract  
High level liabilities  
Lack of alignment  
Do not lose money!  
Manage the contract

Blame  
Short-term focus  
Confusion  
Hierarchy  
Bureaucracy

1. lose-lose
2. win-lose
3. lose-win
4. unlikely win-win

## Manage Risk

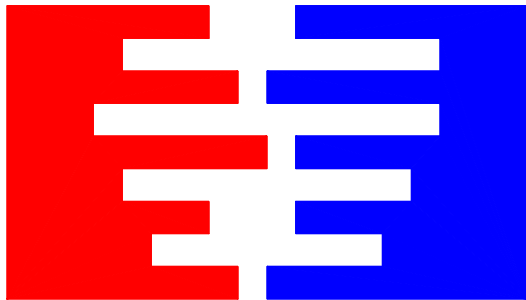
Full alignment  
Long term relationship focused  
Shared risk and reward – no finger pointing  
Development, learning and improvement  
Manage the project

Commitment  
Accountability  
Integrity  
Caring  
Creativity / Resourcefulness  
Performance

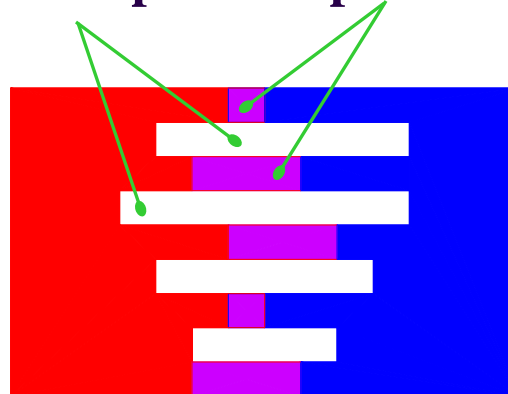
1. win-win
2. -
3. -
4. unlikely lose-lose

# Alignment between ice-sa the contracting Parties

Separate Capabilities



Gaps Duplication



Typical  
Partnering Results  
in Alignment



Employer

Contractor

Employer

Contractor

Partner

Partner

*Alignment: the greatest opportunity for step - change improvement*

# When alignment, diversity ice-sa and inclusion works



- **Section 5 – Payment**

- **Assessing the amount due**
- **Payment**
- **Defined Cost**

**Clause 50**

**Clause 51**

**Clause 52**

- **Section 6 – Compensation events**
  - **Compensation events** **Clause 60**
  - **Notifying compensation events** **Clause 61**
  - **Quotations for compensation events** **Clause 62**
  - **Assessing compensation events** **Clause 63**
  - **The *Project Manager's* assessment** **Clause 64**
  - **Implementing compensation events** **Clause 65**

- Section 6 – Compensation events

4 steps in the compensation events process:

1	Notifying compensation events	Clause 61
2	Quotations for compensation events	Clause 62
3	Assessing compensation events	Clause 63
3	The Project Manager's assessment	Clause 64
4	Implementing compensation events	Clause 65

- **Section 7 – Title**

- **The *Employer's* title to Plant and Material** **Clause 70**
- **Marking Equipment, Plant and Material outside of the Working Area** **Clause 71**
- **Removing Equipment** **Clause 72**
- **Objects and materials within the site** **Clause 73**

- **Section 8 – Risks and insurance**

- |  |           |
|--|-----------|
| • <i>Employer's risks</i>                  | Clause 80 |
| • <i>The Contractor's risks</i>            | Clause 81 |
| • <i>Repairs</i>                           | Clause 82 |
| • <i>Indemnity</i>                         | Clause 83 |
| • <i>Insurance cover</i>                   | Clause 84 |
| • <i>Insurance policies</i>                | Clause 85 |
| • <i>If the Contractor does not insure</i> | Clause 86 |
| • <i>Insurance by the Employer</i>         | Clause 87 |

- **Section 9 – Termination**

- |                                    |                  |
|------------------------------------|------------------|
| • <b>Termination</b>               | <b>Clause 90</b> |
| • <b>Reasons for termination</b>   | <b>Clause 91</b> |
| • <b>Procedures on termination</b> | <b>Clause 92</b> |
| • <b>Payment on termination</b>    | <b>Clause 93</b> |

- **Dispute Resolution Option W1**

- **Dispute resolution**
- **The *Adjudicator***
- **The adjudication**
- **Review by the *tribunal***

**Clause W1.1**

**Clause W1.2**

**Clause W1.3**

**Clause W1.4**

## NEC Jam session 9

- **Pre-award documentation & Developing a contract**  
(prepared by the *Employer* or by the *Contractor* for Subcontracts)

# ice-sa Standard documents and format

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## CIDB - Standard for Uniformity (SFU)

- **Why? ... Benefits are**
  - logical order of documentation to reduce ambiguity
  - check list for every contract
  - easier to complete, check, tender and administer once familiar
  - uniform business-like image

# Additional tender instructions

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- use returnable schedules which solicit
  - preparation of activity schedule (Op A / C)
  - pricing of bills (Op B / D)
  - technical suggestions for design & build
  - outline of temporary works
  - QA plan, HSE requirements etc.
- some become the *Contractor's Works Information*

# CIDB 3 Vol format for tendering

Tender stage documents	Contract award stage documents
<u>Tendering Procedures:</u> T1.1 Letter of invitation T1.2 Tender Data T1.3. CIDB Conditions of Tender <u>Returnable Documents</u> T2.1 List of returnable documents T2.2 Tender Schedules C1.1 Form of Offer and Acceptance C1.2 Contract Data Part 2 C2.2 Activity Schedule / Bill of Quantities <u>The (draft) Contract</u> Part 1 Agreements & Contract Data C1.2 Contract Data Part 1 C1.3 Proforma of Securities Part 2 Pricing Data C2.1 Pricing assumptions Part 3 Scope of Work C3.1: <i>Employer's Works Information</i> Part 4 Site Information	<u>The Contract</u> Part 1 Agreements & Contract Data C1.1 Form of Offer & Acceptance C1.2 Contract Data, Parts 1 and 2 C1.3 Proforma of Securities Part 2 Pricing Data C2.1 Pricing assumptions C2.2 Activity Schedule or Bill of Quantities Part 3 Scope of Work C3.1: <i>Employer's Works Information.</i> C3.2: <i>Contractor's Works Information</i> including <u>some</u> of the T2.2 Tender Schedules that become obligations of contract Part 4 Site Information

- **Notification of Acceptance**
  - brings the contract into existence
  - defines the Contract Date
- **Form of Agreement**
  - confirmation that those who accepted were authorised
- **Or use CIDB Form of Offer and Acceptance with Schedule of Deviations**

# Part 1: Contract Data ice-sa

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- Identification of the terms in *italics* in the conditions of contract
- Enter only the Data applicable to the selected Options and do not change the published statements
- Data provided by the *Employer*
- Data provided by the *Contractor*
  - basis of his tender

# Part 2 Pricing Data ice-sa

- Pricing assumptions for either Activity Schedule or Bill of Quantities
  - Identifies assumptions to be made when preparing the pricing document
- If Option A or C: Activity Schedule provided by the Contractor with tender
- If Option B or D: *Employer's* Bill of Quantities priced by the tenderer

# Part 3: Scope of Work

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## Role of the Works Information

- specifies and describes the *works*
  - the “created” specifications
- states any constraints on how the *Contractor Provides the Works*
  - Constraints compel or restrict the *Contractor*
- includes drawings, models samples
- over 30 cross references from ECC3 clauses

# The Works Information **ice-sa** Links to ECC3

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- many are mandatory
  - Completion, extent of design, *starting date* etc.
- ECC3 will motivate better performance
  - if used as intended
- Engineers, Project Managers, Quantity Surveyors, Lawyers and Commercial Managers need to know ECC3 “Black Book” before providing their input into a contract

# The Works Information

## (Andrew Baird's format)

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- 1 Description of the *works*
- 2 Management & start up
- 3 Engineering & *Contractor's* design
- 4 Procurement
- 5 Construction
- 6 Plant & Materials and workmanship standards

See also “How to write the ECC Works Information”  
which provides a similar format

# 1. Description of the works

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General description with reference to:

- General arrangement and location drawings
- *Employer's* objectives for the project
- Interpretation

## 2. Management & start up

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- Programming
- Quality Assurance
- Communication
- Documentation
- Insurance
- Contractor's supervision
- Meetings
- Change management control
- Accounts, payment & forex
- Bonds & Guarantees
- Title

# 3. Engineering & Contractor's design

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- *Employer's design*
- Parts of the works the *Contractor* designs
- *Employer's* performance specs
- Design services activity matrix
- Design procedure, submission for acceptance
- Use of the *Contractor's* design

# 4. Procurement

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- People
- Plant & Materials
  - Expediting, shipping, importation
- Free issues Plant & Materials by the *Employer*
- Subcontracting
  - Preferred subcontractors, localisation and BBBEE requirements
  - Procedures & conditions

# 5. Construction

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- Temporary works & Working Areas
- Site services & facilities, power, water, waste, security
- Health & Safety on Site
- Construction constraints
- Testing & commissioning
- Completion & use of the works before it
- Correction of Defects

# 6. Plant and Materials ice-sa standards & workmanship

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- Building Trade Preambles
- Civil & structural
- Electrical & mechanical plant
- Process control & IT
- If using standardised specifications, list them here and include variations if any

- Use the simplest words in everyday English. Simple words have few syllables.
- Use short sentences
- Do not use words which are not needed
- Use an adverb or adjective only if it is unavoidable
- Verbs and nouns are precise; adverbs and adjectives are usually imprecise
- Use present tense for all statements of what somebody must do or not do.
- Use capital initials and italics as per contract

# Part 4: Site Information

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- States what is within the Site at time of tender
  - Geotechnical, underground services, as-builts
- Does not include anything that happens after award; that is Works Information
- Site Information does not change; it is provided to the tenderer as information upon which he can base his pricing
- If later found to be wrong – compensation event

# Responsibilities: Suggest .... ice-sa

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- Commercial / Project Management complete Sections 1 to 5
- Technical / Engineers complete Section 6
- Exchange documentation and workshop the result in a Squad Check with all role players present
- CHECK, CHECK AND CHECK AGAIN

# Tender to Acceptance

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- clarification & negotiation A MUST
- Make sure Contract Data is complete and correct
- deal with any qualifications
  - note delegated authority
- agree everything before acceptance
  - including bond if one is requested

# Issue Contract Document

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- revise as necessary to include all adjustments agreed during tender clarification
- DO NOT include tenderer's letters
- DO NOT include anything about the tender phase
- **THE CONTRACT IS THE CONTRACT**

**Reduce uncertainty prior to  
financial commitment**

**Money spent early buys  
more than money spent  
late**

# NEC Jam session 10

- NEC3 and NEC4 – the differences.

# NEC Development and NEC4 launch

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- NEC Voluntary panel since 1993 up to NEC3 in 2005
  - Andrew Baird was a member of the Panel until dissolved in 2010
- NEC4 done by project teams
  - With some remuneration
- Launched in the UK in June 2017
- Here in RSA on 17<sup>th</sup> May 2018

# NEC4 Launch...

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# NEC3 vs. NEC4 key differences

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# NEC3 vs. NEC4

## New Terminology:

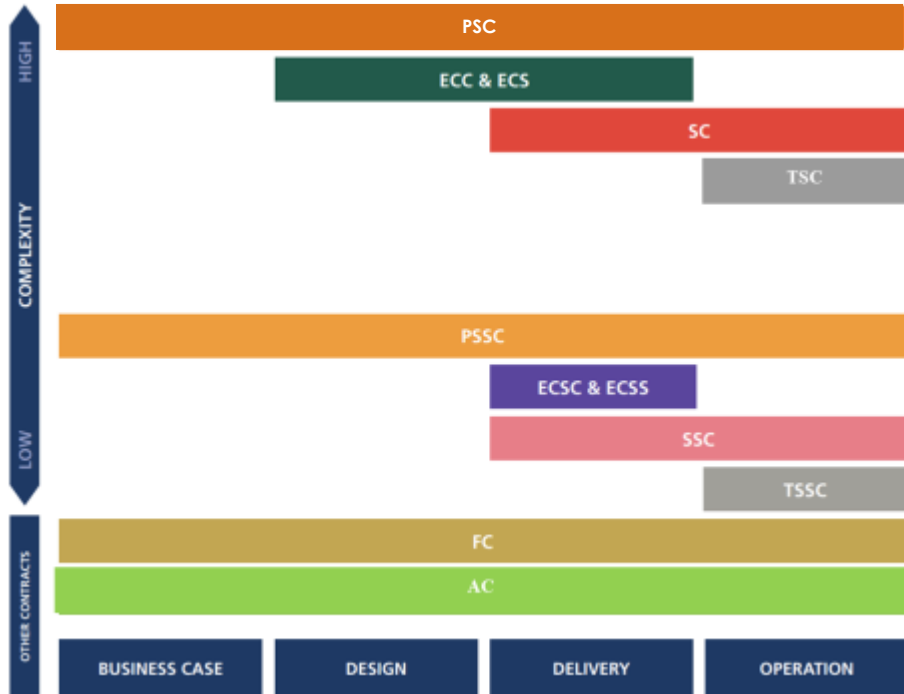
NEC3	NEC4
<i>Employer</i>	<i>Client</i>
Works information	Scope
Risk Register	Early Warning Register
Section 4 (Testing and Defects)	Section 4 (Quality Management)
Section 8 (Risks and Insurance)	Section 8 (Liabilities and Insurance)
He/ his	It/ Its
<i>Employer's Risk</i>	<i>Client's Liability</i>
X4 – Parent Company Guarantee	X4 – Ultimate Holding Guarantee
X12 - Partnering	X12 – Multiparty collaboration
Dispute Resolution	Resolving and Avoiding Disputes

- Payment provisions
- Undertaking to Others
  - collateral warranties
- Early Contractor Involvement (ECI)
- Building Information Modelling (BIM)
- Bribery & corruption clause (Corrupt Acts 18)
- Confidentiality and publicity
- Climate Change
- Alliance Contract (ALC)
- Design, Build and Operate Contract (DBO)
- Update on W1 – Senior management representatives
- Addition of W3

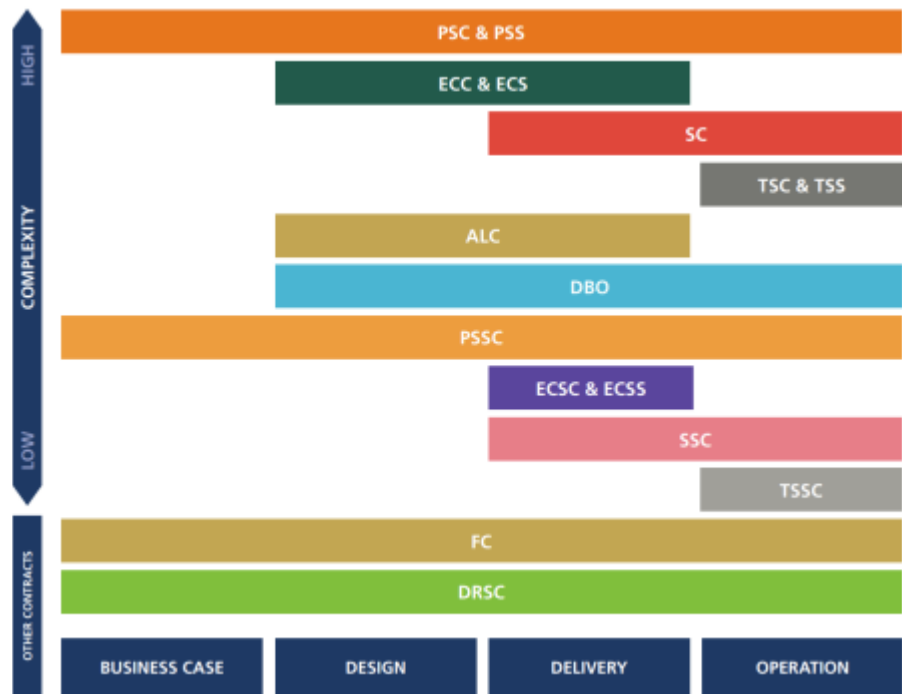
# NEC3 vs. NEC4

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## NEC3



## NEC4



# NEC4 additions at glance



- Transfer of benefits
- Additional compensation events
- Only one *fee percentage*
- Terminology
- Schedule of Cost Components
- Compensation event process in short contracts
- Contract Data format

- Still 6 main Options A to F; select one
- Select W1, W2 or W3 'Resolving and Avoiding Disputes' with new Dispute Resolution Service Contract (DRSC)
- Select from 21 secondary Options; 7 are new
  - X8 Undertakings to the *Client* or Others
  - X9 Transfer of rights
  - X10 Information modelling
  - X11 Termination by the *Client*
  - X21 Whole life cost
  - X22 Early Contractor Involvement (only with Ops C & E)
  - X29 Climate Change

# Core Clauses – Actions and Definitions

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## NEC3 ECC3

10. The *Employer, the Contractor, the Project Manager and the Supervisor* shall act as stated in this contract and in a spirit of mutual trust and co-operation.

## NEC4 ECC4

10.1 The Parties, the *Project Manager and the Supervisor* shall act as stated in this contract

10.2 The Parties, the *Project Manager and the Supervisor* act in a spirit of mutual trust and co-operation.

- **New or revised defined terms, 11.2**
  - (5) A Corrupt Act (also see clause 18 and termination clause 91.8)
  - (8) The Early Warning Register (replaces Risk Register)
  - (10) The Fee; only one *fee percentage*
  - (16) Scope in place of Works Information
  - (19) Subcontractor, now clarified to exclude labour brokers and hire of equipment

# New Clause 16

## Contractor's proposals

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- Express provision for the *Contractor* to propose changes to the *Client's Scope* (16.1)
  - The timescale (4 weeks) and response criteria are defined (16.2)
  - The *Project Manager* does not have to accept the proposal (16.3)
- Under A & B 'the Prices are reduced by an amount calculated by multiplying the assessed effect of the compensation event by the *value engineering percentage*'
  - So the *Client* gets the 'value engineering percentage' of the saving
- Under C & D, the benefit is shared as in ECC3 due to 63.11

- The programme submitted for acceptance to be in the form stated in the Scope
- Addition to clause 31.3. The Contractor's programme submitted for accepted is treated as accepted if the Project Manager does not reply in time.
- Acceleration clause 36 revised for clarity

# New clause 53 final assessment

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- The *Project Manager* assesses final amount due 4 weeks after the *Supervisor* issues the Defects Certificate
- The *Project Manager* gives the *Contractor* details & final payment is made within 3 weeks of assessment
- If the *Project Manager* does not assess on time, the *Contractor* may issue to the *Client* its assessment of amount due. If the *Client* agrees final payment made within 3 weeks
- Final amount due issued within stated time is conclusive evidence of final amount due unless a Party disputes under W1, W2 or W3

# 6. Compensation events

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- Proposed instructions are moved from 61.2 & dealt with under new clause 65 and new CE (20)
  - clearly differentiating these from compensation events
  - claim for doing quotations that are not accepted are no longer excluded under Options A and B
- (21) Additional compensation events stated in Contract Data
- Clause 60.1(14) (and 80.1) : ECC3's '*Employer's risk*' is now a '*Client liability*'

# New compensation events in NEC4

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(20) The *Project Manager* notifies the *Contractor* that a quotation for a proposed instruction is not accepted

(21) Additional compensation events stated in Contract Data part 1

# Dispute Resolution Option clause

W1 and W2 and now W3



# Resolving and avoiding disputes

- New Option W3. W1 and W2 changed
- W1 - first refer to *Senior Representatives* of the Parties; that part not agreed then goes to Adjudication as before
- W3 uses a Dispute Avoidance Board (DAB) followed by the *tribunal* (arbitration or court) if no agreed outcome. Does not use the *Adjudicator*
- DAB only provides recommendations for dispute resolution
- The *Adjudicator* and DAB appointed in terms of NEC4 Dispute Resolution Service Contract.
  - Adjudicator's Contract discontinued

# NEC4 – Summary of changes

Some key points about NEC4:

- Two new contracts: Design, build and operate (DBO) and Alliance Contract (ALC)
- Subcontracts for PSC and TSC
  - In addition to existing subcontract for ECC
- Review and Acceptance of Defined Cost before the end of contract (13 weeks) – Main options C,D,E and F.
- Subcontractor Costs included in the Schedule of Cost Components (SCC)
- Working Area, People and Design Overheads removed – only one Fee percentage for all Defined Cost
- “Treated Acceptance” for Programme if not approved by the *Project Manager*
- The requirement to show “implemented compensation events” in the *Contractor’s* programme has been removed. (all activities must be in the programme)
- Consensual dispute resolution
  - Change in W1 – management *Senior Representatives* to engage first
  - Dispute Avoidance Board in W3

# Other changes...

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NEC3	NEC4
Contractor's	Contractor's
Shorter Schedule of Cost Components	Short Schedule of Cost Components
this contract	the contract
key people	key persons
Communication 13	Includes digital contract management
PM , S, C "notifies"	In some Clauses changed to PM , S, C "informs"
Clause Repairs 82	deleted
Clause Indemnity 83	Clause Recovery of costs 82

# The most visible change (from outside...)

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The Guidance Notes  
now 4 volumes per  
contract of which two  
volumes are common to  
each contract

- Vol 1:  
Establishing a  
Procurement and  
Contract Strategy
- Vol 2: Preparing  
a xxx contract
- Vol 3: Selecting a  
Supplier
- Vol 4: Managing  
a xxx contract

Vol 1: Procurement and contract strategies											
Vol 2: Contract preparation											
ECC/ECS	ECSC/ECSS	PSC	PSSC	TSC	TSSC	SC	SSC	DBO	ALC	FC	DRSC
Vol 3: Supplier selection											
Vol 4: Contract management											
ECC/ECS	ECSC/ECSS	PSC	PSSC	TSC	TSSC	SC	SSC	DBO	ALC	FC	DRSC

# In summary:

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- The criteria for changes introduced in NEC4 contracts are to support the changing requirements of users, stimulate good project management, improve clarity and simplicity
- Users who are familiar with NEC3 contracts will have no trouble moving to NEC4. The style, layout, terminology and key project management processes that run through in NEC contracts remain
- NEC4 is evolution of NEC3...

# The end of NEC Jam combined Sessions 9 and 10



QUESTIONS



# Next NEC Jam Session

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## February 2025

**Thank you for your  
participation**

**Feedback is welcome**

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