

MINIT MESYUARAT BIL. 3
CITP IWG ON NATIONAL SPECIFICATION FOR CONSTRUCTION
CITP-IWG15/I1a-NSC

Tarikh	:	8 Ogos 2017 (Selasa)
Masa	:	11.00 pagi – 12.00 tengah hari
Tempat	:	Bilik Mesyuarat Kempas Tingkat 32, CIDB Malaysia Menara Dato' Onn, PWTC No. 45, Jalan Tun Ismail 50480 Kuala Lumpur
Pengerusi	:	En Kamaluddin Hj. Abdul Rashid Timbalan Ketua Pengarah, Sektor Bangunan Jabatan Kerja Raya (JKR)

KEHADIRAN

- | | | |
|-----|----------------------------------|--|
| 1. | En Kamaluddin Hj. Abdul Rashid | - JKR |
| 2. | Dato' Sr Srikanan Kanagainthiram | - Royal Institution of Surveyors Malaysia (RISM) |
| 3. | En. Zamri Salleh | - Kementerian Kesejahteraan Bandar, Perumahan dan Kerajaan Tempatan (KPKT) |
| 4. | Pn Fakheezah Borhn | - Jabatan Standard Malaysia (JSM) |
| 5. | Ar. Zamri Ismail | - Pertubuhan Arkitek Malaysia (PAM) |
| 6. | Ir. Hj. Shahul Ikram Adnan | - Institution of Engineer Malaysia (IEM) |
| 7. | Dato' Soam Hong Choon | - Real Estate & Housing Developers' Association Malaysia (REHDA) |
| 8. | Mr Ong Ka Thiam | - Master Builders Association Malaysia (MBAM) |
| 9. | Sr Sariah Abd. Karib | - Construction Industry Development Board (CIDB) |
| 10. | Sr Mohd Zaid Zakaria | - CIDB |
| 11. | Sr Nazir Muhamad Nor | - CIDB |
| 12. | Sr Noridah Shaffii | - CIDB |

TIDAK HADIR

- | | | |
|----|---------------------------|--|
| 1. | Ar. Zairul Azidin Badri | - JKR (Caw. Arkitek) |
| 2. | Ir. Razdwan Kasim | - JKR (Caw. Kejuruteraan Mekanikal) |
| 3. | Ir. Muhammad Azman Jamrus | - JKR |
| 4. | En. Mohd Sor Othman | - Jabatan Pengairan dan Saliran Malaysia (JPS) |
| 5. | En Esa Ahmad | - Jabatan Landskap Negara |
| 6. | En Abdul Aziz Long | - SIRIM Berhad |
| 7. | Ir. Looi Hip Peu | - The Electrical and Electronics Association of Malaysia (TEEAM) |
| 8. | Ir. Wong See Fong | - Association of Consulting Engineers Malaysia (ACEM) |

TURUT HADIR

- | | | |
|----|-------------------------------------|--------|
| 1. | Ir. Chen Thiam Leong | - ACEM |
| 2. | Pn. Suhana Mohd Said | - CIDB |
| 3. | En. Syed Muhammad Nazir Syed Othman | - CIDB |

URUSETIA

- | | | |
|----|----------------------------------|--------|
| 1. | Pn. Nursazwaziha Binti Salehudin | - CIDB |
| 2. | Pn. Nurul Izzati Abdul Wahab | - CIDB |

1. UCAPAN ALUAN TUAN PENGERUSI

- 1.1. Tuan Pengurus mengucapkan selamat datang dan terima kasih kepada semua ahli jawatankuasa yang hadir.

2. KEMASKINI SENARAI KEAHLIAN IWG 15

- 2.1. Penaja inisiatif, Sr Sariah Abd Karib mewakili CIDB mengucapkan tahniah kepada Tuan Pengurus di atas kenaikan pangkat daripada ahli kepada pengurus jawatankuasa dan juga sebagai Timbalan Ketua Pengarah JKR.
- 2.2. Mesyuarat mengambil maklum, Sr Mohd Zaid Zakaria telah menggantikan Puan Zainora sebagai pemilik inisiatif.

3. PENGESAHAN MINIT MESYUARAT IWG 15 BIL. 2

- 3.1. Minit mesyuarat tidak disertakan bersama senarai kehadiran. OIC diminta untuk melampirkan senarai kehadiran dalam minit mesyuarat akan datang.

Tindakan : Pemilik Inisiatif

- 3.2. Mesyuarat telah bersetuju Minit Mesyuarat IWG 15 Bil. 2 disahkan tanpa pindaan.

4. MAKLUMBALAS PERKARA BERBANGKIT DARI MESYUARAT IWG 15 BIL. 2

- 4.1. Mesyuarat telah mengambil maklum semua perkara berbangkit telah diambil tindakan sepanjang tempoh daripada mesyuarat terakhir yang diadakan pada 23 Jun 2016 dan kebanyakan perkara akan dibincang dalam Agenda 5 (Pengesahan KPI dan Sasaran Tahunan yang Dikemaskini di Bawah Inisiatif I1a) dan Agenda 6 (Pembentangan *Term of Reference* (TOR)).
- 4.2. Senarai maklumbalas perkara berbangkit dari mesyuarat IWG 15 Bil 2 disertakan di **Lampiran A**.
- 4.3. Mesyuarat dimaklumkan bahawa CIDB telah melantik perunding untuk mengkaji kertas cadangan pembangunan *National Specification for Construction* yang telah di terima pada November 2016 yang dikemukakan oleh perunding KPK QS dan NBS UK. Perunding telah mencadangkan pembangunan *National Specification for Construction (NSC)* dengan kemampuan *Building Information Modeling (BIM)* sekaligus telah mengubah halatuju inisiatif ini.

- 4.4. Penaja inisiatif, Sr Sariah Abd Karib menjelaskan satu Jawatankuasa Khas juga telah ditubuhkan bagi mengkaji kebolehlaksanaan pembangunan NSC dengan keupayaan BIM. Jawatankuasa tersebut dipengerusikan oleh Penaja Inisiatif I1a dan ahlinya yang terdiri daripada, wakil E-Construct, 2 ahli IWG 11 (BIM), 2 ahli IWG 15 (NSC) dengan 1 profesional yang berkepakaran dalam BIM. Sebanyak 3 mesyuarat telah diadakan dan mesyuarat terakhir pada 9 Jun 2017.

5. PEMBENTANGAN PENCAPAIAN DAN KEMAJUAN INISIATIF I1A Q2/2017

- 5.1. Hasil pencapaian inisiatif I1a bagi suku kedua tahun 2017 boleh dirujuk di **Lampiran B**
- 5.2. Pn Sariah memaklumkan bahawa satu lawatan teknikal ke National Building Specification (NBS), Newcastle, UK telah dijalankan pada April 2017 untuk mengenalpasti pembangunan NBS sedia ada di negara berkenaan. Hasil daripada lawatan, ahli TC-NSC dan juga pihak pengurusan tertinggi CIDB bersetuju bahawa *NBS specification tools* merupakan salah satu pembangunan yang bertransformasi kepada industri pembinaan di Malaysia.
- 5.3. Setelah perbincangan daripada lawatan ringkas oleh Ketua Eksekutif NBS, Richard Waterhouse pada 27 Julai 2017 diadakan, hasil daripada perbincangan tersebut mendapati terdapat 3 bentuk aturan komersial boleh dicadangkan oleh pihak NBS. Secara dasarnya, bentuk aturan komersial tersebut adalah seperti berikut:
- i. Model Pelaksanaan Secara Usahasama
Penubuhan syarikat usahasama yang melibatkan E-construct dan NBS. CIDB Malaysia akan membayai kos pembangunan bagi sistem NSC. Syarikat usahasama ini akan memperolehi hasil daripada jualan lesen kepada pengguna sistem NSC dan peratusan keuntungan akan diagihkan kepada CIDB Malaysia.
 - ii. Model Pelaksanaan Secara Pembayaran Royalti
CIDB Malaysia akan menanggung kos pembangunan sistem NSC. CIDB juga berperanan dalam membuat kutipan bayaran bagi setiap yuran langganan yang dikenakan kepada pengguna sistem ini. Pembayaran royalti akan diberikan kepada NBS.
 - iii. Model Pelaksanaan Secara Subsidi
CIDB Malaysia akan membeli sistem NSC tersebut dan yuran lesen akan dibayar kepada NBS secara tahunan.
- 5.4. Walaubagaimanapun, maklumat terperinci mengenai ketiga-tiga bentuk model komersial akan diperolehi secara rasmi daripada NBS tertakluk kepada *Term of Reference* yang dimuktamadkan dalam mesyuarat ini.
- 5.5. Dato' Sri Kandan menjelaskan elemen *exit clause* perlu diambil kira bagi setiap keputusan yang diambil dalam apa-apa bentuk aturan komersial. Keperluan *exit clause* penting untuk memastikan CIDB mendapat pemilikan penuh terhadap sistem ini tanpa bergantung kepada NBS selepas tamat tempoh penyelenggaraan.

- 5.6. Selain itu, mesyuarat bersetuju bahawa pemilikan kepada sistem ini hendaklah termasuk perkara berikut:
 - a) *IT platform/system*
 - b) *Specification content – Malaysian*
 - c) *Exit clause*
 - d) *Collaboration with the industries*
 - e) *Business model*
 - f) *Advertisement*
- 5.7. Mesyuarat ambil maklum bahawa IWG 11 (BIM) akan mengetuai pembangunan sistem berintergrasi dengan BIM. Manakala, IWG 15 (NSC) akan mengetuai pembangunan spesifikasi nasional.
- 5.8. Bahagian Pengurusan CITP mencadangkan penambahan ahli daripada wakil E-Construct ke dalam jawatankuasa ini dan dipersetujui oleh ahli mesyuarat.

Tindakan : Bahagian Pengurusan CITP

- 5.9. Dato' Soam Hong Choon menjelaskan bahawa cadangan perniagaan yang bakal diterima daripada NBS perlu dinyatakan jumlah yuran pendaftaran bagi langganan terhadap sistem. Hasil daripada maklumat ini dapat menentukan nilai sistem yang bakal dibangunkan ini dan dapat menarik minat pengguna. Selain itu, Dato' Soam menekankan sekali lagi mengenai penglibatan industri di dalam proses pembangunan sistem ini supaya pihak industri mempunyai lebih banyak keterbukaan di dalam penggunaan NSC di masa akan datang.

6. PENGESAHAN KPI DAN SASARAN TAHUNAN YANG DIKEMASKINI DI BAWAH INISIATIF I1A

- 6.1. Mesyuarat bersetuju dengan KPI dan Sasaran Tahunan yang dicadangkan dengan masih mengekalkan KPI 098 dan KPI 099 dan mengemaskini sasaran tahunan berdasarkan TOR yang terkini (**Rujuk Lampiran C**).
- 6.2. KPI dan Sasaran Tahunan akan dibentangkan semula di mesyuarat akan datang selepas CIDB menerima cadangan daripada NBS.

7. PEMBENTANGAN *TERM OF REFERENCE* (TOR)

- 7.1. Mesyuarat telah bersetuju secara dasarnya *Term Of Reference* (TOR) yang telah dibentangkan dalam mesyuarat sebelum ini. Walaubagaimanpun, Pengurus mencadangkan agenda bagi pengesahan TOR dibuat secara terperinci terutama bagi penambahan skop mengenai BIM dibuat secara berasingan. Mesyuarat bersetuju perbincangan TOR akan diadakan pada 11 Ogos 2017 (Jumaat) yang akan dipengerusikan oleh Dato' Sri Kandan (**LAMPIRAN D**).

8. HAL-HAL LAIN

- 8.1. Tuan Pengurus mengucapkan terima kasih sekali lagi kepada semua ahli jawatankuasa yang hadir dan menangguhkan mesyuarat pada jam 12.30 tengah hari.

Makluman

Disediakan oleh;



(Nama: Sr Nazir Muhamad Nor)

Tarikh : 22/9/17

Disemak oleh;



(Nama: Sr Mohd Zaid Zakaria)

Tarikh : 27/9/17

Disahkan oleh;

(Nama: En Kamaluddin Hj. Abdul Rashid)

Tarikh :

LAMPIRAN A

MAKLUMBALAS PERKARA BERBANGKIT DARI MESYUARAT IWG 15 BIL.2

RUJ.	MINIT	TINDAKAN OLEH	MAKLUMBALAS
3.1	<p>Pemilik inisiatif telah membentangkan cadangan CITP charter kepada ahli mesyuarat. Walaubagaimanapun, terdapat beberapa pembetulan yang perlu dibuat ke atas charter tersebut:</p> <ul style="list-style-type: none"> a. Tajuk dan aktiviti perlu diperbaiki dengan membuang perkataan 'Standard' b. Mengemaskini potential external partners (professional boards, association & other identified stakeholders) c. Mengemaskini working group (CIDB, JKR, JPS, REHDA, MBAM, SIRIM, RISM, KPKT, PAM, ACEM, IEM, TEEAM, STANDARDS MALAYSIA) d. Mengemaskini aktiviti mengikut sasaran KPI CITP dengan membuat pindaan ke atas jadual Charter dengan menambah kolumn untuk deliverables 	OIC	<p>Charter telah dikemaskini dan akan dibentangkan dalam Agenda 5 (Pengesahan KPI dan Sasaran Tahunan yang Dikemaskini di Bawah Inisiatif I1a)</p>

LAMPIRAN A

1

MAKLUMBALAS PERKARA BERBANGKIT DARI MESYUARAT IWG 15 BIL.2

RUJ.	MINIT	TINDAKAN OLEH	MAKLUMBALAS
4.1	<p>Pemilik inisiatif membentangkan cadangan Terma Rujukan Perunding kepada ahli mesyuarat. Ahli mesyuarat berpendangan bahawa skop perkhidmatan perunding perlu dikemaskini mengikut penetapan berikut:</p> <ul style="list-style-type: none"> h. Memberi input, menyediakan bahan penulisan berkaitan Spesifikasi Pembinaan Nasional bagi tujuan promosi dan Majlis Pelancaran Dokumen Spesifikasi Pembinaan Nasional. 	OIC & Pemilik inisiatif	<p>Perkara ini akan dibentangkan di dalam Agenda 6 (Pembentangan Terms of Reference (TOR))</p>
4.2	<p>Deliverables dan sub-deliverables perlu dipinda selari dengan skop perkhidmatan yang telah dikemaskini.</p>	OIC & Pemilik inisiatif	<p>Perkara ini akan dibentangkan di dalam Agenda 6 (Pembentangan Terms of Reference (TOR))</p>
4.3	<p>Tempoh perkhidmatan perunding baharu yang dicadangkan oleh ahli mesyuarat adalah 12 bulan dari tarikh lantikan. Ahli mesyuarat berpendapat cadangan asal tempoh pembangunan iaitu 7 bulan adalah terlalu singkat dan hampir mustahil memandangkan pembangunan inisiatif ini perlu mendapatkan meklumbalas industri sekurang-kurangnya di dua peringkat pembangunan.</p>	OIC & Pemilik inisiatif	<p>Perkara ini akan dibentangkan di dalam Agenda 6 (Pembentangan Terms of Reference (TOR))</p>

LAMPIRAN A

2

MAKLUMBALAS PERKARA BERBANGKIT DARI MESYUARAT IWG 15 BIL.2

RUJ.	MINIT	TINDAKAN OLEH	MAKLUMBALAS
4.4	Ahli mesyuarat mencadangkan agar pelawaan tender / sebutharga dipanjangkan kepada badan bebas pengaruh antarabangsa seperti NBS, Construction Industry Council Hong Kong, Building Construction Authority Singapore dan National Research Council Canada. Walaubagaimanapun, ahli mesyuarat berpendapat bahawa penglibatan gabungan syarikat antarabangsa dan syarikat tempatan merupakan pilihan yang lebih baik memandangkan pengetahuan syarikat berkenaan terhadap keadaan industri pembinaan semasa negara.	OIC & Pemilik inisiatif	<p>Pelawaan telah dibuat kepada NBS, Construction Industry Council Hong Kong, Building Construction Authority Singapore dan National Research Council Canada melalui emel. Walaubagaimanapun tiada respon yang diberikan. CIDB telah mengemukakan pelawaan Cadangan Teknikal dan Kewangan (CTK) kepada KPK Quantify Surveyors (Peninsular) Sdn. Bhd . pada 10 November 2016.</p> <p>Cadangan teknikal dan kewangan perunding telah diterima pada 30 Disember 2016 dengan cadangan pembangunan yang melebihi skop pembangunan dalam TOR yang diluluskan oleh IWG 15. Cadangan perunding adalah untuk membangunkan spesifikasi moden dengan BIM Capability yang merujuk kepada NBS tools. Skop ini berkait dengan pembangunan Building Information Modelling di bawah Inisiatif P4a & P4b .</p> <p>Satu Jawatankuasa Khas telah ditubuhkan bagi mengkaji kebolehlaksanaan pembangunan NSC dengan keupayaan BIM. Jawatankuasa tersebut dipengerusikan oleh Penaja Inisiatif I1a dan ahlinya yang terdiri daripada 2 ahli IWG 11, 2 ahli IWG 15 dengan 1 profesional yang berkepakaran dalam BIM. Sebanyak 3 mesyuarat telah diadakan dan mesyuarat terakhir pada 9 Jun 2017.</p>

LAMPIRAN A

3

MAKLUMBALAS PERKARA BERBANGKIT DARI MESYUARAT IWG 15 BIL.2

RUJ.	MINIT	TINDAKAN OLEH	MAKLUMBALAS
4.5	Pemilik inisiatif memaklumkan bahawa, pelawaan tender/ sebutharga akan dibuat secara perolehan terhad (<i>restricted procurement</i>). Pemilik inisiatif dan OIC diminta untuk membuat pelawaan tidak rasmi kepada syarikat seperti yang dinamakan di item 4.4 untuk mendapatkan maklumbalas terhadap keinginan untuk menyertai sebut harga rasmi serta merta sementara proses memuktamadkan terma rujukan perunding (TRP)	OIC & Pemilik inisiatif	Ambil maklum. Perkara ini akan dibentangkan di dalam Agenda 6 (Pembentangan Terms of Reference (TOR))
4.6	Sekiranya terdapat maklumbalas minat daripada syarikat berkenaan, beberapa penambahbaikan perlu dibuat ke atas terma rujukan perunding (TRP), antaranya: a. Tambahan ke atas skop perunding iaitu memastikan spesifikasi yang dibangunkan bersesuaian dengan praktis domestik; dan b. Menterjemah terma rujukan perunding ke Bahasa Inggeris	OIC & Pemilik inisiatif	Perkara ini akan dibentangkan di dalam Agenda 6 (Pembentangan Terms of Reference (TOR))
6.1	PMO memaklumkan bahawa di satu perbincangan lain diperangkat Thrust Working Group (TWG) bahawa penglibatan perwakilan sektor swasta adalah tidak mencukupi. PMO meminta pertimbangan Pengerusi dan ahli mesyuarat untuk penambahan ahli jawatankuasa melibatkan sektor swasta sekiranya dirasakan perlu.	PMO	Makluman sahaja

LAMPIRAN A

4

MAKLUMBALAS PERKARA BERBANGKIT DARI MESYUARAT IWG 15 BIL.2

RUJ.	MINIT	TINDAKAN OLEH	MAKLUMBALAS
6.2	Oleh yang demikian, Timbalan Pengerusi mencadangkan agar PMO membuat jemputan kepada Royal Institution of Surveyors Malaysia (RISM). PMO diminta untuk mendapatkan pencalonan dari Timbalan Pengerusi selaku Presiden RISM dengan segera.	PMO	Surat jemputan keahlian telah dihantar kpd pihak RISM pada 24 Jun 2016 yang lalu. Pihak RISM akan membincangkan perkara ini di dalam mesyuarat QS committee.
6.3	Selain itu, dengan mengambilira persetujuan dan cadangan ahli mesyuarat untuk melantik wakil daripada JSM, PMO diminta untuk memanjangkan jemputan lantikan ahli jawatankuasa IWG 15 – National Specification for Construction (NSC) kepada En Ridzwan Kassim dari Jabatan Standard Malaysia	PMO	Surat jemputan keahlian telah dihantar kepada Jabatan Standard Malaysia dan JSM telah menamakan Pn Fakheezah Borhan, Penolong Pengarah Kanan JSM sebagai wakil di dalam IWG15.
6.4	OIC diminta untuk mengemaskini slide Jawatankuasa dengan mengasingkan ahli mesyuarat mengikut kumpulan berikut: a. Perwakilan Sektor Awam b. Perwakilan Sektor Swasta c. Perwakilan CIDB Malaysia	OIC	Seperti di Lampiran 1

LAMPIRAN A

5

SEKTOR AWAM
<ul style="list-style-type: none"> • En. Kamaluddin bin Hj. Abdul Rashid (JKR) – [Chairman] • Ir. Muhammad Azman bin Jamrus (JKR) • Ar. Zairul Azidin bin Badri (JKR) • Ir. Razdwan bin Kasim (JKR) • Dato' Haji Abu Bakar bin Johar (JKT) / En Zamri Salleh (JKT) • En. Mohd Sor bin Othman (JPS) • En. Esa bin Ahmad (JLN) • Pn. Fakheezah binti Borhan (JSM)

LAMPIRAN A

SEKTOR SWASTA
<ul style="list-style-type: none"> • Dato' Sr. Srikandan Kanagainthiram (KKP) [Co-Chairman] • En. Abdul Aziz bin Long (SIRIM) • Ar. Zamri bin Ismail (PAM) • Ir. Wong See Foong (ACEM) • Dato' Soam Heng Choon (REHDA) • Mr. Ong Ka Thiam (MBAM) • Ir. Hj. Shahul Ikram bin Adnan (JSP EMNEA) • Ir. Looi Hip Peu (MEKTRICON)

CIDB MALAYSIA
<ul style="list-style-type: none"> • Sr Sariah Abd Karib • Sr Mohd Zaid Zakaria • Sr Nazir Muhamad Nor • Sr Noridah Shaffii

LAMPIRAN 1 ⁶

LAMPIRAN B



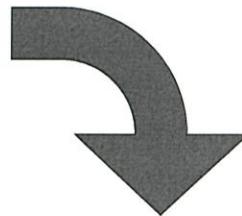
Initiative I1a
Introduce National Specification for Construction

LAMPIRAN B

Achievements and ongoing up to Q2 2017

Special committee
(TC-NCS) established
in March 2017

Review scope of
development of NSC



Technical visit to NBS, UK
April 2017

TC-NCS and CIDB top management agreed
NBS specification tools is transformational to
Malaysian Construction Industry

Partners

JKR, KPKT, JPS, REHDA, MBAM, SIRIM, RISM, PAM, ACEM, IEM, TEEAM,
STANDARDS MALAYSIA, MOF

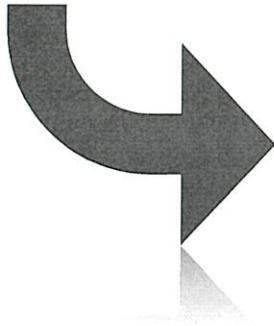
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Initiative I1a
Introduce National Specification for Construction

LAMPIRAN B

Achievements and ongoing up to Q2 2017



TC-NCS Report Completed in
June 2017

5 Way Forward Identified

1. To develop NSC with BIM capability
2. To adopt NBS specification tools, well established specification system
3. To direct collaborate with NBS subject to both parties mutual agreement on commercial aspect
4. Development of specification platform and integration to BIM platform lead by IWG11
5. Development of content specification lead by IWG15

Partners

JKR, KPKT, JPS, REHDA, MBAM, SIRIM, RISM, PAM, ACEM, IEM, TEEAM,
STANDARDS MALAYSIA, MOF

2



Initiative I1a

Introduce National Specification for Construction

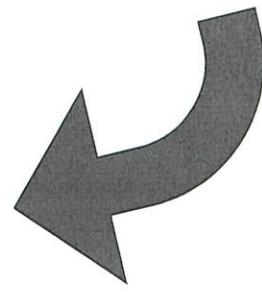
LAMPIRAN B

Achievements and ongoing up to Q2 2017

Meeting with NBS held
in July 2017

- 3 Business Model Identified
- TOR revised and shared with NBS
- NBS to give a proposal within 2 weeks

The revised TOR for National Specification is to be endorsed by IWG15 on 8th August 2017.



Partners

JKR, KPKT, JPS, REHDA, MBAM, SIRIM, RISM, PAM, ACEM, IEM, TEEAM,
STANDARDS MALAYSIA, MOF

3

LAMPIRAN C

I1a Introduce National Specification for Construction

CITP KPI		Annual Target for CITP KPI				
I1-097		2016	2017	2018	2019	2020
National Specification for Construction introduced and published by 2018	KPI Leader : CIDB	Inception report endorsed by IWG15 Study report endorsed by IWG15 Weightage: 20%	Final NSC draft endorsed by IWG15 Study/Review on the scope of development of NSC Proposal on the new scope of development for NCS endorsed by IWG15 and BOD National Specification for Construction 10% completed - Issuance of Request for Proposal (RFP) 5% - Appointment of consultant 5% Weightage: 10%	National Specification for Construction Published 50% completed National Specification for Construction launched Weightage: 40%	National Specification for Construction Published 90% Weightage: 40%	National Specification for Construction 100% completed and Published National Specification for Construction launched Weightage: 10%
I1-098		2016	2017	2018	2019	2020
National Specification for Construction adopted by 10 Major Clients by 2020	KPI Leader : CIDB		10 clients to adopt NSC endorsed by IWG15 Weightage: 5%	MOU documentation with 10 clients endorsed by IWG15 MOU signing ceremony with 10 clients on usage of NSC held Weightage: 25%	Promotion activities to enhance uptake of NSC conducted Weightage: 60%	MOU documentation with 10 clients endorsed by IWG15 MOU signing ceremony with 10 clients on usage of NSC held Promotion activities to enhance uptake of NSC conducted NSC industry adoption report endorsed by IWG15 Weightage: 40%
I1-099		2016	2017	2018	2019	2020
50 projects adopt National Specification for Construction by 2020	KPI Leader : CIDB		Strategy for getting buy-in to use NSC for 50 projects endorsed by IWG15 Weightage: 5%	MOU with clients for 50 projects endorsed by IWG15 Weightage: 35%	Promotion activities to enhance uptake of NSC conducted Weightage: 50%	Promotion activities to enhance uptake of NSC conducted NSC industry adoption report endorsed by IWG15 Weightage: 50%

LAMPIRAN D

LAMPIRAN D

TERMS OF REFERENCE APPOINTMENT OF CONSULTANT FOR THE

DEVELOPMENT OF NATIONAL SPECIFICATIONS FOR CONSTRUCTION (NSC) WITH BIM CAPABILITY FOR CONSTRUCTION INDUSTRY DEVELOPMENT BOARD MALAYSIA

TERMS OF REFERENCE

TERMS OF REFERENCE FOR APPOINTMENT OF CONSULTANT TO DEVELOP NATIONAL SPECIFICATION FOR CONSTRUCTION (NSC) WITH BIM CAPABILITY

1. **TITLE OF SERVICES**
Consultancy Services To Develop a National Specification for Construction with BIM Capability.
2. **INTRODUCTION**
 - 2.1. Construction Industry Transformation Program (CITP) 2016-2020 was introduced to develop and propose a number of initiatives to improve the performance of the local construction industry to the international level. Construction Industry Development Board Malaysia (CIDB) are now actively implementing initiatives contained under 4 main strategic thrusts; Quality, Safety and Professionalism, Environmental Sustainability, Productivity and Internationalisation.
 - 2.2. As a step in improving the performance of local industry players, CITP 2016-2020 under the Strategic Thrust 4 Internationalisation, proposed the initiative to internationalize practice and construction standards is by introducing a construction specifications in generally resulting from the collection, integration and consolidation of specifications available either it is an international specification, region specification, national specifications and even the specification of a specific company.
 - 2.3. This step will also integrate the public standard specifications to become more holistic. It will reduce disputes, contradictions and uncertainties of opinion and eventually will improve the uniformity of the specifications used in the construction industry. The proposed national specification for construction (NSC) will cover all specifications available including building material, safety, environmental, methods, quality of workmanship (*workmanship*) and so on.
 - 2.4. To ensure this specifications constantly being reviewed and updated systematically and yet remain relevant in future, development of national specification should be digitalised and integrated with BIM platform. To enable the digital modern specifications with BIM capability, a proper tools/system with a systematic content specification need to be

- developed to become a centralised source of information that facilitate the industry players to develop the project specifications quickly and accurately complying with certain minimum standards.
- 2.5. This National Specification for Construction will give added value to each construction project as it will lead to cost reduction, efficient cost management and a minimum wastage.
- 2.6. Eventually, this construction specification will contribute towards improving the quality and performance of the parties involved in implementing domestic construction projects. This standardization will also create business competition between local and foreign players to bid for projects in the domestic market. The ability to remain competitive in our own local market would contribute to the Strategic Thrust 4 of Internationalization under CITP.

3. OBJECTIVES OF DEVELOPMENT

- 3.1. To establish a platform/system which includes a library of National Specification for Constructions for building works, civil and infrastructure works as a tools/mechanism for construction stakeholders to inculcate best practices in preparing specifications for construction projects nationwide;
- 3.2. To develop content specifications for building works, civil and infrastructure works with regard to specifications of quality, building material, safety, environmental, methods (*workmanship*) and etc in accordance to the platform/system and tools/mechanisms developed to ensure the performance and quality of construction achieve the minimum standards set; and
- 3.3. To minimize disputes, contradictions and uncertainty resulting from inconsistent practices in the preparation of project specifications.

4. SCOPE OF SERVICES

4.1 Development of Content Specifications

1. To conduct a study on construction specifications available in the domestic market i.e Public Works Department's specifications, Kementerian Kesejahteraan Bandar, Perumahan & Kerajaan

Tempatan - Pertubuhan Arkitek Malaysia, Mass Rapid Transit Corporation, Tun Razak Exchange and KLIA specifications

2. To study all statutory requirements for materials such as "schedule 4" of CIDB Act, Malaysia Standard, etc. to be incorporated in the proposed National Specification for Construction (NSC);
3. To propose main list of content for the National Specification for Construction (NSC) that includes specification of building works, civil and infrastructure works for the consideration and approval of the Initiative Working Group IWG15 - NSS;
4. To develop content specifications for the NSC for building works, civil and infrastructure works with regard to specifications of quality, building material, safety, environmental, methods (*workmanship*) and etc for the approval of the Initiative Working Group IWG15 - NSS;
5. To obtain and consolidate feedback from the industry on the content specification (initial draft) of the NSC and to prepare reports on industry validation with justifications and to make changes or amendments on the draft if any;
6. To amend and update the initial draft of the content specification of the NSC;
7. To obtain and consolidate feedback from the industry on the second draft of the content specification of the NSC and to prepare reports on industry validation with justifications and to make changes or amendments on the draft if any;
8. To prepare a final draft of the content specification for the consideration and approval of the Initiative Working Group (IWG15- NSS) for the development of the NSC;
9. Getting approval from the Initiative Working Group (IWG15- NSS) for the development of the NSC under CITP; and
10. To provide input in the preparation of written materials related to the NSC for promotional purposes of the Launching Ceremony of NSC

4.2 Development of System/Platform and Tools/mechanism for Specifications

1. To conduct a study on construction specifications systems/tools available locally and internationally i.e NBS create, masterformat, etc
2. To propose the development design of system/tools for specifications suitable for Malaysian construction industry and Malaysia BIM platform as per requirement outlined by the MyBIM Centre/BIM development consultant for the approval of CIDB and BIM Technical Committee. This stage should comprise the following:
 - a. Initial meeting between CIDB, key stakeholders, consultants and Consultant Project team to define:
 - i. Project plan & governance
 - ii. Roles & responsibilities of project team and stakeholders
 - b. Project Scoping & Requirement Analysis:
 - i. System/tools format/layout
 - ii. Content Management
 - iii. Data Analysis and associated costing information format
 - iv. Input data types/classification/language
 - v. Output data fields
 - vi. User management
 - c. Second meeting workshop for Functional requirement/specification documentation & review, and
 - d. Agreement with stakeholders & functional requirement/specification sign off
3. To develop the system/tools for national specifications for construction suitable for Malaysian construction industry and Malaysia BIM platform based on agreed functional specification as approved by CIDB and BIM Technical Committee including coding development, testing and fixing issues raised,
4. To provide a User Acceptance Test upon the completion of tools/system development comprising:
 - a. Preparation for user acceptance testing and conduct the testing process
 - b. Test data entry/upload
 - c. User acceptance testing
 - d. Minor modification

- e. Retest for changes
- f. Stakeholder sign-off

5. To develop communication strategy and training programme, support and provide training on the use of tools/system to the relevant construction stakeholders for the period of 1 year throughout the process of adoption of NSC by stakeholders

6. DELIVERABLES AND SUB-DELIVERABLES

Num.	Deliverables	Deliverables on the available construction domestically and the available specifications system overseas	Sub-Deliverables
1	Study Report on the available construction domestically and the available specifications system overseas	1.1 Compilation of construction specifications available in the domestic market i.e Public Works Department's specifications, Kementerian Kesejahteraan Bandar, Perumahan & Kerajaan Tempatan, Pertubuhan Arkitek Malaysia, Mass Rapid Transit Corporation, Tun Razak Exchange and KLIA specifications,	
1.2	<i>Inception Report</i> - Summary of recommendations to the existing specifications and proposal on specifications classification based on model used in the industry; and recommendations on the best specification system to be adopted and tailored to the Malaysian construction industry		
1.3	Paper proposal and presentation to IWG15-NSS for approval on the proposed framework for NCS and approval from IWG15-NSS		
2	Preliminary/ First drafts of the National Specification for Construction (NSC)	Content Development Main Content List for the National Specification for Constructions for approval of IWG15-NSS;	2.1

Num.	Deliverables	Sub-Deliverables	Deliverables	Sub-Deliverables
			5 Construction industry feedback report on the Second Draft	5.1 Content Development Paper/proposal on methodology to consolidate feedback from industry;
				5.2 A complete list of industry players involved in the feedback;
				5.3 Feedback from the industry.
			6 Final Draft of the National Specification for Constructions	Content Development Report on changes and enhancement with justifications. System Development 100% of the data entry for NSC completed including list of amendments made and/or discarded
				6.1 6.2
			7 Kertas Pertimbangan for IWG15-NSS Committee approval	Content Development Three (3) copies (hard copy) of the Final Draft of the National Specification for Construction; Three (3) copies (soft copy) of the Final Draft of the National Specification for Constructions in original format of word, excel and pdf.
				7.1 7.2
				System Development 100% completed full form specifications uploaded into the delivery software (to provide the platform for the specifications and facilitate linkage for a fully BIM enabled system)
				7.3
3	Construction industry feedback report on the Preliminary/First Draft	Content Development Paper/proposal on methodology to consolidate feedback from industry; A complete list of industry players involved in the feedback; Feedback from the industry.	3.1 3.2 3.3	System Development 100% of the system for the NSC developed and 40% of the data entry completed
4	Second drafts of the National Specification for Construction	Content Development Interim report -Report on changes and enhancement with justifications System Development 80% of the data entry for NSC completed	4.1 4.2	Promotion materials of NSC, Trainings and technical support services on NSC
			8.	Promotion Video and Written brochures/ materials related to the National Specification for Constructions for Launching and promotional purposes approved by CDB Malaysia and IWG15-NSC
				8.1

Num.	Deliverables	Sub-Deliverables
	2.2 Content specification on construction materials; 2.3 Content specifications on safety; 2.4 Content specifications on environment; 2.5 Content specifications on methods; 2.6 Content specifications on workmanship (workmanship); 2.7 Other specifications.	System Development Design of the specification software platform with classification tailored with the main content list of NSC for the approval of IWG15-NSS
	2.8 2.9 50% of the system for the NSC developed	System Development 100% completed full form specifications uploaded into the delivery software (to provide the platform for the specifications and facilitate linkage for a fully BIM enabled system)
3	Construction industry feedback report on the Preliminary/First Draft	Content Development Paper/proposal on methodology to consolidate feedback from industry; A complete list of industry players involved in the feedback; Feedback from the industry.
4	Second drafts of the National Specification for Construction	Content Development Interim report -Report on changes and enhancement with justifications System Development 80% of the data entry for NSC completed

Num.	Deliverables	Sub-Deliverables
		<p><u>Trainings</u></p> <p>Training Module for NSC system user manuals and training videos approved by CIDB Malaysia and IWG15-NSS</p>
8.3	Schedule of trainings to be organised and report on trainings conducted for the period of 12 months.	
8.4	Maintenance and support services	<p>Maintenance of the software platform and report on users related issues solved for the period of 12 months.</p>

b. Delivery of Deliverables is in phases based on the following schedule:

Deliverable	Report Delivery Date / Duration (months)
Deliverable 1	60 days of development (2 months)
Deliverable 2	450 days of development (15 months)
Deliverable 3	30 days of development (1 month)
Deliverable 4	30 days of development (1 months)
Deliverable 5	30 days of development (1 month)
Deliverable 6 & 7	30 days of development (1 month)
Deliverable 8	360 days of development (12 month)
TOTAL	990 days/33 MONTHS

7. METHODOLOGY DEVELOPMENT

- a. The development of this National Specification for Construction is recommended to use the following methodology based on the scope of consultancy services or any additional methodologies that are appropriate in achieving deliverables and sub-deliverables specified:

a. Secondary data analysis; policy, literature review;

- b. Analysis on the current practice of industry player domestically and internationally;
- c. Analysis from the construction professionals/consultants in preparing specifications for projects;
- d. Interviews with industry players involved in the preparation of construction specifications available; i.e PWD officers and consultants;
- e. Meetings and workshops with industry players;
- f. Organizing feedback sessions / newspaper advertising for public comment / distribution for public comment; and
- g. Analysis of industry feedback received.

8. TEAM CONSULTANT

- a. The consultant is free to identify and appoint experts as members of the development team.
- b. The consultants must provide details of the work shows the allocation of resources (people, time, equipment, and so on) to perform such work.
- c. CV of each team members should be submitted to CIDB Malaysia when submitting technical and financial proposals.

9. RESULTS AND IMPACT OF DEVELOPMENT

- a. The development of National Specification for Construction will contribute towards the enhancement of the quality and performance of the players in the construction industry and domestic construction projects.
- b. The National Specification for Construction will create uniformity in preparing project specifications and this will also create business competition between local and foreign players to bid for projects in the domestic market and increase the ability of local players to remain competitive.

10. **PERIOD OF DEVELOPMENT**
- a. In overall, number of days required to develop National Specification for Constructions are nine hundred and ninety (990) days / 33 months (**Including Commercial and Public Holidays**) from the date of appointment.
11. **INTELLECTUAL PROPERTY RIGHTS**
- a. **Deliverables** and **sub-deliverables** prepared and submitted by the consultant under this terms of reference are the intellectual property of CIDB. No part or parts need to be reproduced in any form without prior permission by CIDB. CIDB reserves the right to alter, modify or change any information if it deems so.
 - b. The consultant and CIDB Malaysia is obliged to take all reasonable measures to protect confidential information disclosed by either party, if any.
12. **AMENDMENT AND EXTENSION OF THE PERIOD OF AGREEMENT**
- a. Amendment and extension of the period of agreement for government procurement consultancy services can be approved by the origin Approving Authority (PBM). Among the factors that allowed for the extension of the period of agreement include:
 - i. Changes in scope;
 - ii. *Force Majeure*;
 - iii. Delays caused by any of the contingency referred to in the contract;
 - iv. Instructions given by the Government which resulted in the suspension of the project;
 - v. Delays caused by the Government and other delays
 - b. The validity period of the agreement shall remain in force during the application of the amendment and extension of the period of agreement envisaged, applied and considered.
13. **LATE PENALTY (LAD)**
- a. CIDB Malaysia has the right to impose a liquidated ascertain damages (LAD) at a certain rate with the following number of days late as stipulated in the letter of appointment if the consultant fails to submit deliverables / sub-deliverables by a specified date.
 - b. Imposition of the liquidated damages (LAD) is made by deduction of progress payments for consultancy services based on a formula established by the Government as follows:
- $$\text{LAD} = \frac{\text{Base Lending Rate} \times \text{Consultancy Fees}}{365}$$
- (subject to a minimum of RM100 per day)*
14. **TERMINATION OF CONSULTANCY SERVICES**
- a. CIDB Malaysia has the right to terminate the services of consultants by giving written notice of termination of service immediately without any prejudice if:
 - a. The consultant failed to produce deliverables/sub-deliverables within a specified period without reasonable excuse;
 - b. The consultant failed to carry out its duties in accordance with the scope determined at his/her full commitment;
 - c. The consultant found to have violated any of the Terms and Conditions of Consultant's appointment as outlined; and
 - d. The consultant failed to attend meetings or workshops set.
 - b. Termination of service caused by Corruption or Act Misconduct:
 - a. Consultant is being prosecuted under laws relating to corruption or misconduct in administering the contract / agreement either for this project or any other Government projects;
 - b. With the termination of service, the government has a right to demand all losses, costs, damages and expenses (including any incidental costs and expenses) incurred by the government as a result of the termination of such services; and

- c. For prevention of doubt, the parties hereby agree that the company / firm is not entitled to make a claim for any loss including loss of profits, damages, claims or any claims after termination of the agreement / contract.

15. FEES OF CONSULTANCY SERVICES

- a. Payment of consulting services shall be in accordance with the stages of progress of the project / study as follows:-

SCHEDULE OF PROGRESS PAYMENTS OF CONSULTANCY SERVICES

Stage of Work Progress	Payment
Deliverable 1 Study Report on the available construction specifications domestically and the available specifications system overseas	5% upon submission of the <i>inception Report</i> and approval IWG15-NSS
Deliverable 2 Preliminary/First drafts of the National Specification for Construction (NSC)	25% upon submission of the First Draft and 50% of the specification system developed
Deliverable 3 Construction industry feedback report on the Preliminary/First Draft	25% upon submission of the Report on Industry feedback on First draft and 100% of the specification system developed with 40% of data entry completed
Deliverable 4 Second drafts of the National Specification for Construction	20% upon submission of the Second Draft Report on changes and enhancement with justifications with 80% of data entry completed
Deliverable 5 Construction industry feedback report on the Second Draft	5% upon submission of the Report Industry feedback on Second draft
Deliverable 6 & 7 Final Draft of the National Specification for Constructions & IWG15 Committee Approval	15% during the final approval Committee IWG15-NSS and 100% of completed full form specifications uploaded into te delivery software

Deliverable 8 Promotion materials of NSC, Trainings and technical support services on NSC	5% upon approval of CIDB Malaysia on the promotional materials, completion of training programmes and maintenance period
OVERALL TOTAL	100%

- a. Consultancy fees claimed are excluded GST 6%. CIDB Malaysia will pay the fees of consultant progressively based on the table of schedule of payment above.

16. COST OF REIMBURSABLE CLAIMS (IB)

- a. Any expenses (other than consultants' fees) are subject to the requirements of a development CIDB Malaysia has the right to cancel the reimbursable claims if it is not reasonable or not supported with a receipt / bill;
- b. Details and rates of reimbursable claim do-not-exceed-the-ceiling-as specified-in-Appendix A.-The-rate-and-cost-of-reimbursable-claims-are subject to the rate set in the Manual of Procurement of Consultant Services 2011 edition, Ministry of Finance; and
- c. CIDB reserves the right to cancel the reimbursable claims that exceed the cut-off date.

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ESTIMATED COST OF REMUNERATION

DESCRIPTION	ESTIMATED COST (RM)	
A. ORGANISING MEETING		
i-Meeting-IWG-15—Claims-trip for 4 consultants 70KM-RM0.70 X 4 X 3-times Total claims would RM42.00 X 2 X 4	588.00 96.00	
B. ORGANISING MEETING		
i-Tickets 4 consultants RM1000 (4-way) X 4 ii-RM0.70 X 70KM X 4 X 2-sessions Claims Tol R 20.00 X 4 X 4 trip iii-Parking fee RM3.50 X 60 X 2-hour-sessions	8,000.00 392.00 320.00 420.00	
C. FOREIGN CONSULTANT		
i-Allowance-Payments maximum of 90-days Per diem allowance (60 days) £.310 / day The remaining 30-days X RM170	18,600.00 5,100.00	
D. COMMUNICATION		
i-Phone-calls, fax, e-mail and the delivery of services such as postal and etc-for lump sum (without bills) RM750 X 15-Months	11,250.00	
E. COST OF DOCUMENTATION AND PREPARATION OF REPORT		
a- Preliminary report b- Second report c. Draft Final Report d. Final report e. Progress report	Maximum-RM50 / Set Maximum-RM80 / Set Maximum-RM150 / Set Maximum-RM250 / Set Maximum-RM50 / Set	
	20 set 20 set 5 sets 5 sets 2 sets-of X 15 Months	
	TOTAL GST 6% CEILING TOTAL AGREED	50,866.00 3,052.00 53,918.00

APPENDIX A