Hong Kong Alliance of Built Asset & Environment Information Management Associations
香港建設資產及環境信息管理聯盟

buildingSMART Hong Kong

The idea of **Information eXchange Centre** Establishment

30 September 2022

LSCM Summit 2022

Digitalization in Construction
(the lowest in the list)

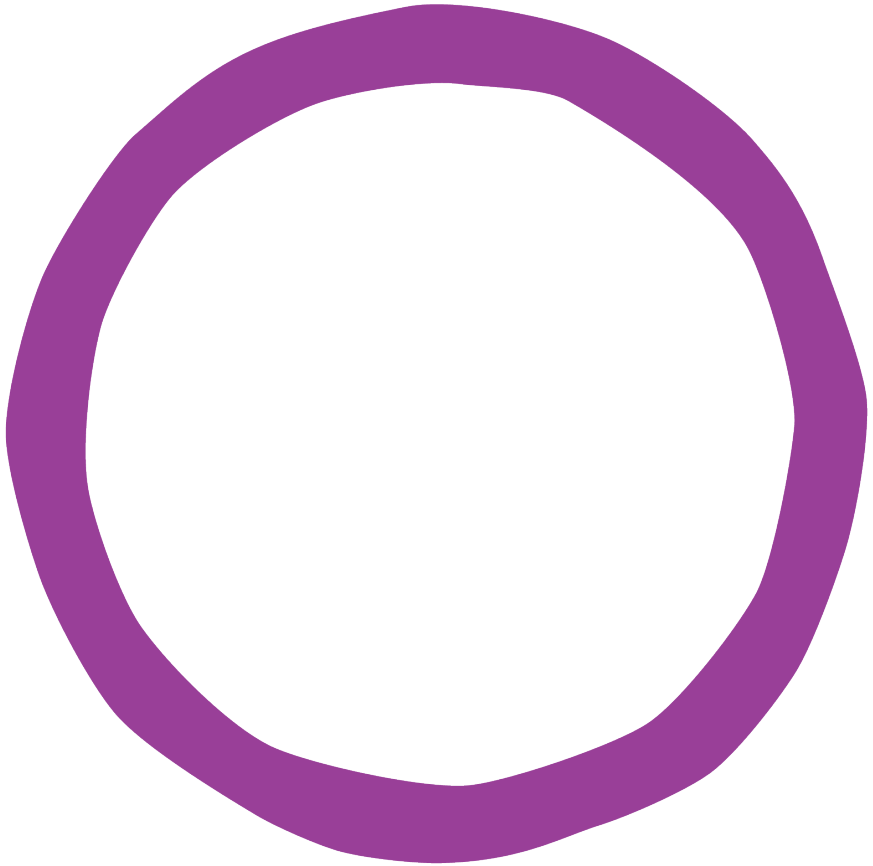
According to McKinsey's '2017 Digital China report' the digitalization level in construction is the lowest among all the other industries in China.

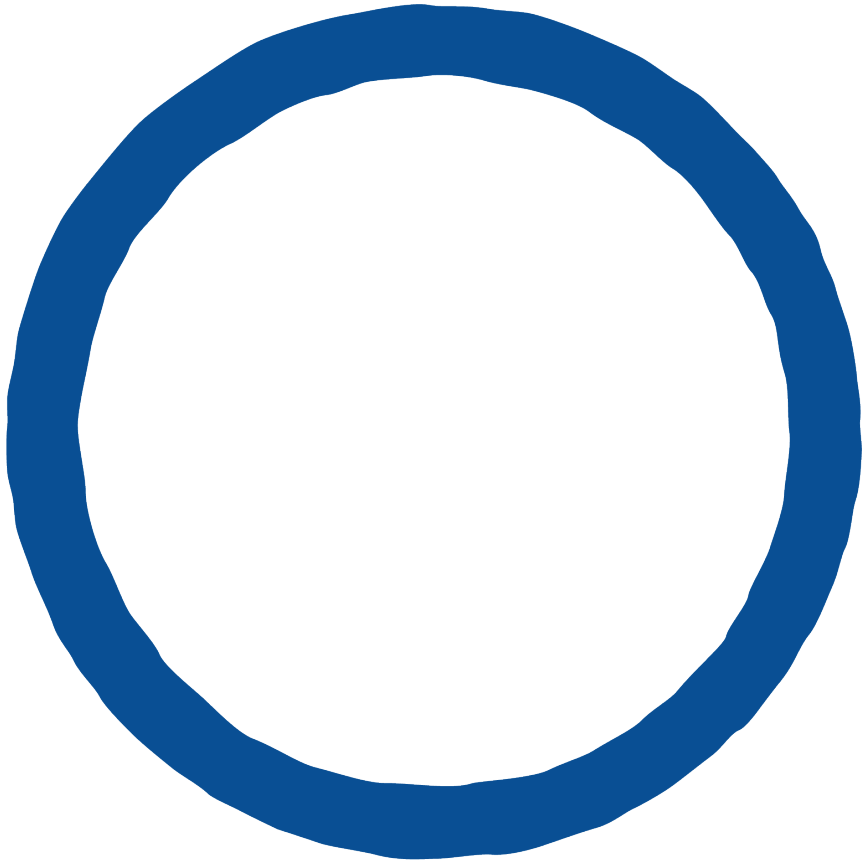
MCKINSEY GLOBAL INSTITUTE

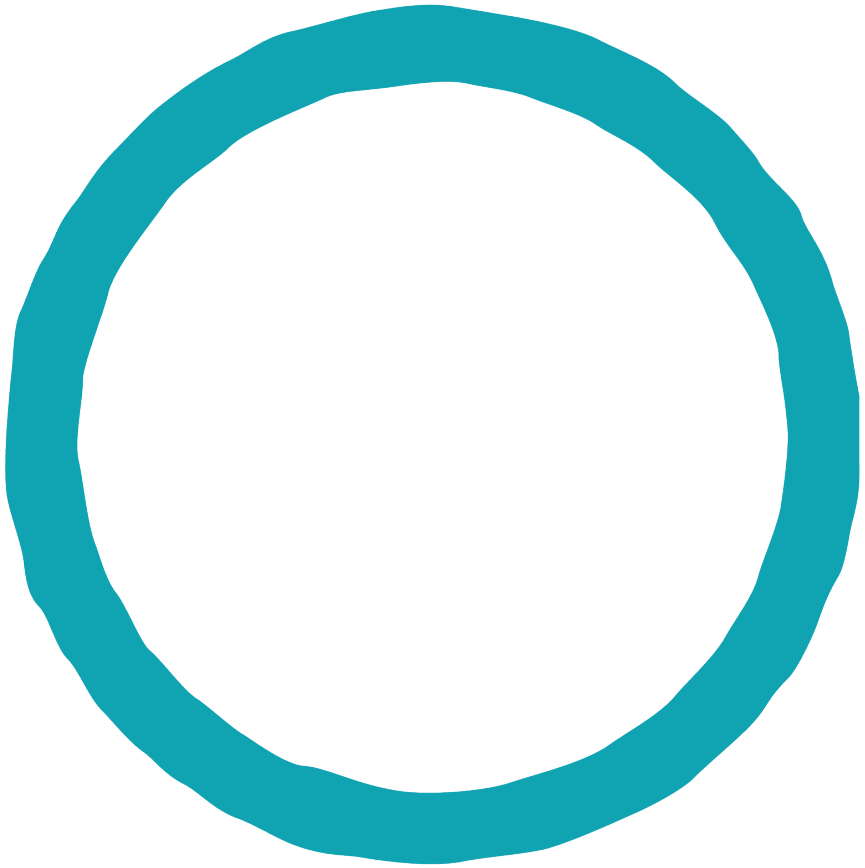
DIGITAL CHINA:
POWERING THE ECONOMY TO GLOBAL COMPETITIVENESS

DECEMBER 2017

Opportunity and time to change!





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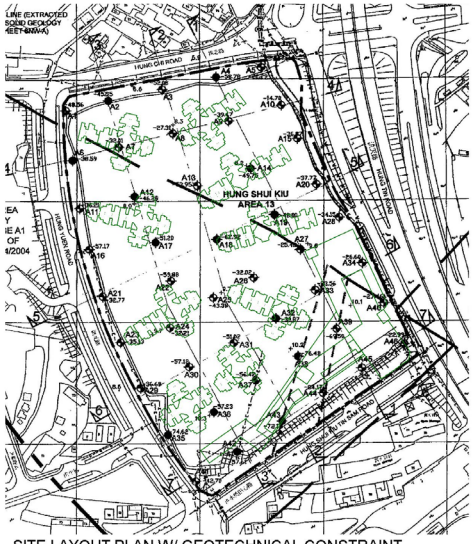
Technology ring …

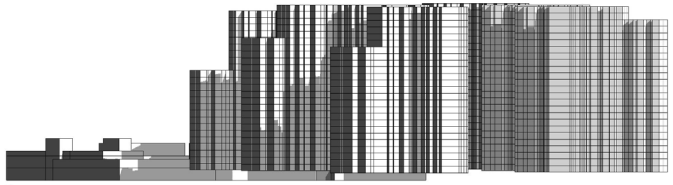
With BIM …

1 SITE LAYOUT PLAN
1 : 1500

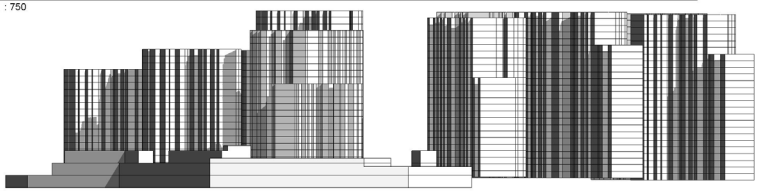


2 SITE LAYOUT PLAN W/ GEOTECHNICAL CONSTRAINT
1 : 1500

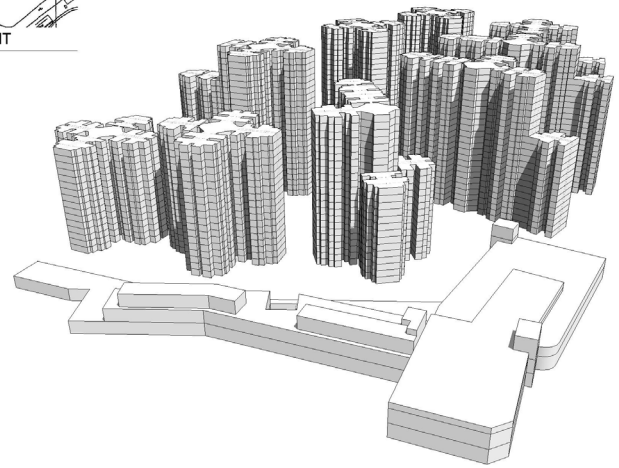
Area Schedule		
Area Type	**Floor Area**	**Percentage**
Auxillary	562 m²	0%
Auxillary: 50	562 m²	
Common Area	57,429 m²	26%
Common Area: 206	57,429 m²	
HKHA 1_2P	22,086 m²	10%
HKHA 1_2P: 1172	22,086 m²	
HKHA 1B1	76,933 m²	35%
HKHA 1B1: 2114	76,933 m²	
HKHA 2_3P	29,301 m²	13%
HKHA 2_3P: 1112	29,301 m²	
HKHA 2B	29,910 m²	14%
HKHA 2B: 661	29,910 m²	
HKHA 2B2	1,131 m²	1%
HKHA 2B2: 25	1,131 m²	
Grand total: 5340	217,352 m²	



3 North
1 : 750



4 East
1 : 750



5 PERSPECTIVE VIEW

SK.1

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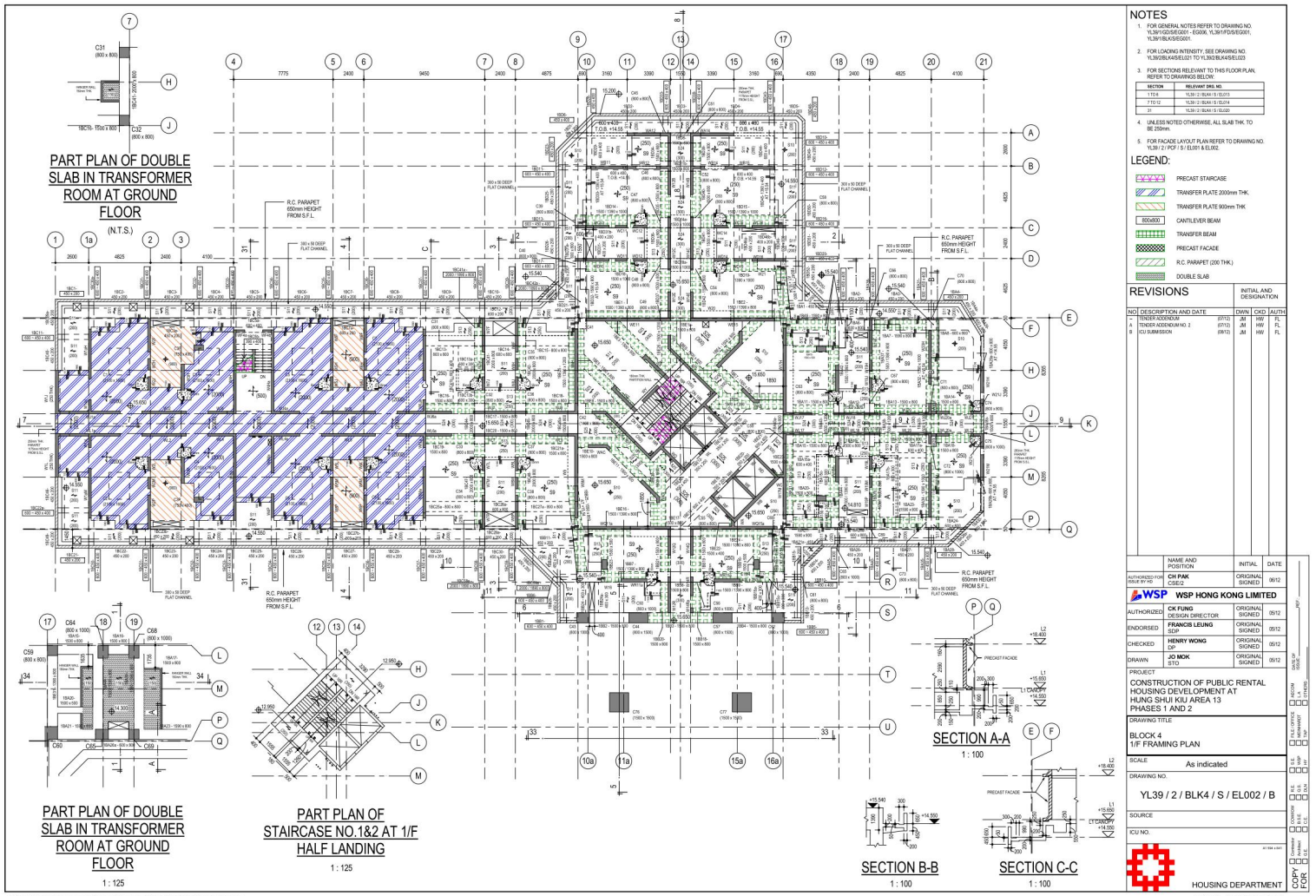
With BIM …


PART PLAN OF DOUBLE SLAB IN TRANSFORMER ROOM AT GROUND FLOOR
(N.T.S.)
PART PLAN OF DOUBLE SLAB IN TRANSFORMER ROOM AT GROUND FLOOR
1 : 125
PART PLAN OF STAIRCASE NO.1&2 AT 1/F HALF LANDING
1 : 125
SECTION A-A
1 : 100
SECTION B-B
1 : 100
SECTION C-C
1 : 100
NOTES
1. FOR GENERAL NOTES REFER TO DRAWING NO. YL39/1/GD/S/EG001 - EG006, YL39/1/FD/S/EG001, YL39/1/BLK/S/EG001.
2. FOR LOADING INTENSITY, SEE DRAWING NO. YL39/2/BLK4/S/EL021 TO YL39/2/BLK4/S/EL023.
3. FOR SECTIONS RELEVANT TO THIS FLOOR PLAN, REFER TO DRAWINGS BELOW:
SECTION | RELEVANT DRG. NO.
1 TO 6 | YL39 / 2 / BLK4 / S / EL013
7 TO 12 | YL39 / 2 / BLK4 / S / EL014
31 | YL39 / 2 / BLK4 / S / EL020
4. UNLESS NOTED OTHERWISE, ALL SLAB THK. TO BE 250mm.
5. FOR FACADE LAYOUT PLAN REFER TO DRAWING NO. YL39 / 2 / PCF / S / EL001 & EL002.
LEGEND:
PRECAST STAIRCASE
TRANSFER PLATE 2000mm THK.
TRANSFER PLATE 900mm THK
800x800 CANTILEVER BEAM
TRANSFER BEAM
PRECAST FACADE
R.C. PARAPET (200 THK.)
DOUBLE SLAB
REVISIONS
NO | DESCRIPTION AND DATE | DWN | CKD | AUTH
– TENDER ADDENDUM (07/12) JM HW FL
A TENDER ADDENDUM NO. 2 (07/12) JM HW FL
B ICU SUBMISSION (08/12) JM HW FL
NAME AND POSITION | INITIAL | DATE
AUTHORISED FOR ISSUE BY PIC: CH PAK CSE/2 ORIGINAL SIGNED 08/12
WSP HONG KONG LIMITED
AUTHORIZED: CK FUNG DESIGN DIRECTOR ORIGINAL SIGNED 05/12
ENDORSED: FRANCIS LEUNG SDP ORIGINAL SIGNED 05/12
CHECKED: HENRY WONG DP ORIGINAL SIGNED 05/12
DRAWN: JO MOK SITO ORIGINAL SIGNED 05/12
PROJECT
CONSTRUCTION OF PUBLIC RENTAL HOUSING DEVELOPMENT AT HUNG SHUI KIU AREA 13 PHASES 1 AND 2
DRAWING TITLE
BLOCK 4
1/F FRAMING PLAN
SCALE: As indicated
DRAWING NO.: YL39 / 2 / BLK4 / S / EL002 / B
SOURCE
ICU NO.
HOUSING DEPARTMENT
COPY FOR
U:\BIM\J2615-BIM-001 Hung Shui Kiu Area 13 Phase 2 (CB2010009)\CAD\Revit\J2490 BLK 4.rvt
PRINTED: 9/8/2012 12:45:34 PM

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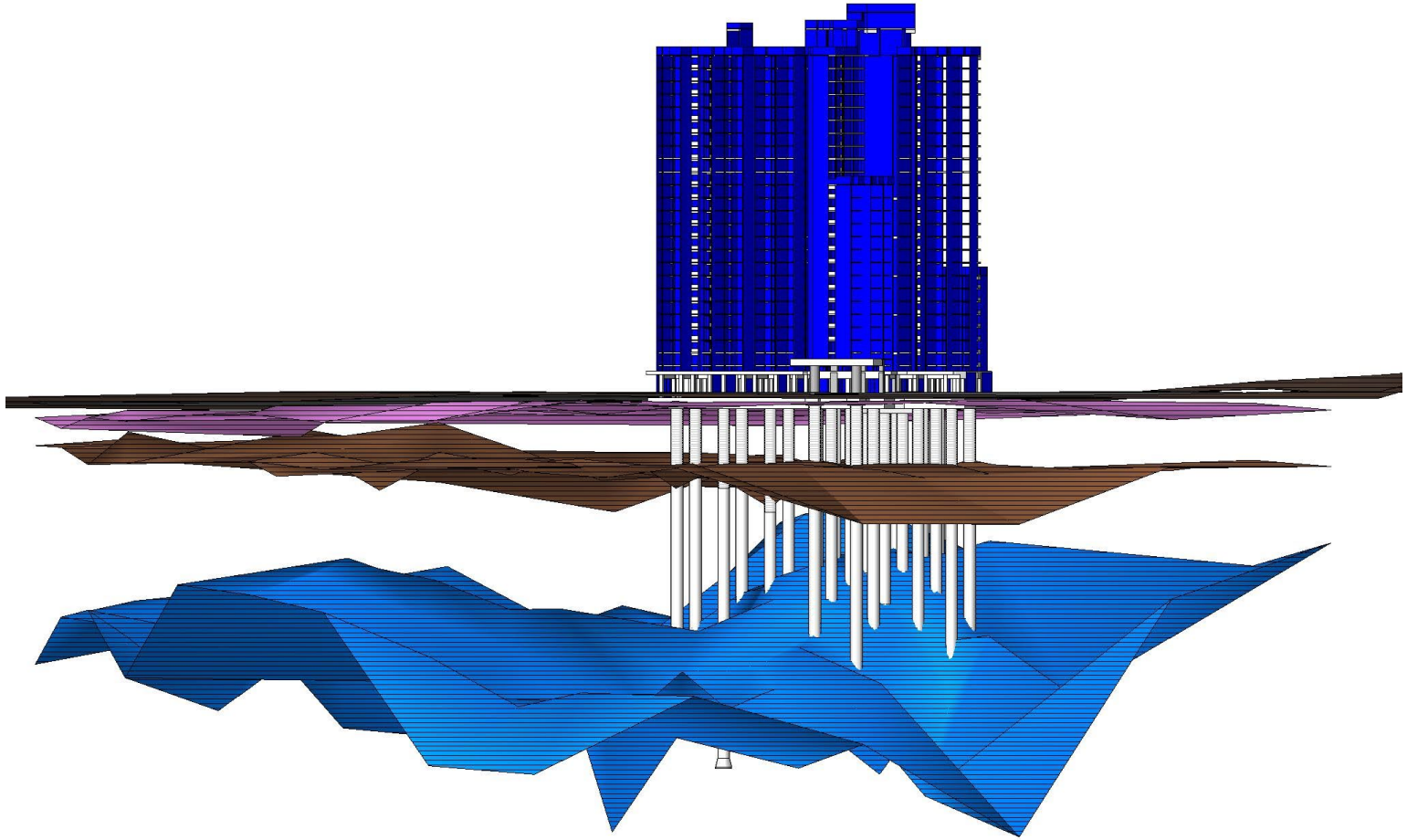
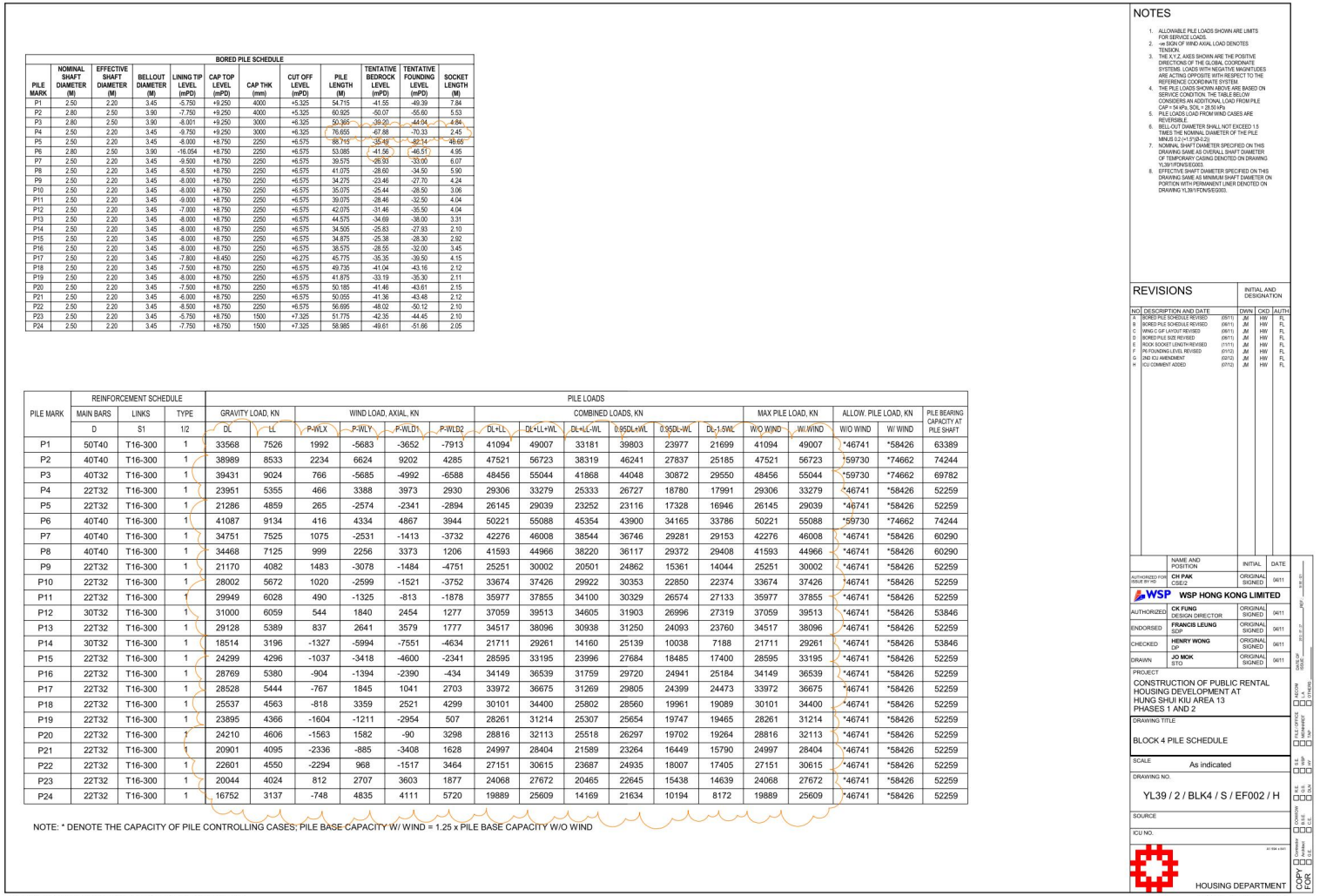


With BIM …



BORED PILE SCHEDULE

PILE MARK	NOMINAL SHAFT DIAMETER (M)	EFFECTIVE SHAFT DIAMETER (M)	BELLOUT DIAMETER (M)	LINING TIP LEVEL (mPD)	CAP TOP LEVEL (mPD)	CAP THK (mm)	CUT OFF LEVEL (mPD)	PILE LENGTH (M)	TENTATIVE BEDROCK LEVEL (mPD)	TENTATIVE FOUNDING LEVEL (mPD)	SOCKET LENGTH (M)
P1	2.50	2.20	3.45	-5.750	+9.250	4000	+5.325	54.715	-41.55	-49.39	7.84
P2	2.80	2.50	3.90	-7.750	+9.250	4000	+5.325	60.925	-50.07	-55.60	5.53
P3	2.80	2.50	3.90	-8.001	+9.250	3000	+6.325	50.365	-39.20	-44.04	4.84
P4	2.50	2.20	3.45	-9.750	+9.250	3000	+6.325	76.655	-67.88	-70.33	2.45
P5	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	88.715	-35.49	-82.14	46.65
P6	2.80	2.50	3.90	-16.054	+8.750	2250	+6.575	53.085	-41.56	-46.51	4.95
P7	2.50	2.20	3.45	-9.500	+8.750	2250	+6.575	39.575	-26.93	-33.00	6.07
P8	2.50	2.20	3.45	-8.500	+8.750	2250	+6.575	41.075	-28.60	-34.50	5.90
P9	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	34.275	-23.46	-27.70	4.24
P10	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	35.075	-25.44	-28.50	3.06
P11	2.50	2.20	3.45	-9.000	+8.750	2250	+6.575	39.075	-28.46	-32.50	4.04
P12	2.50	2.20	3.45	-7.000	+8.750	2250	+6.575	42.075	-31.46	-35.50	4.04
P13	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	44.575	-34.69	-38.00	3.31
P14	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	34.505	-25.83	-27.93	2.10
P15	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	34.875	-25.38	-28.30	2.92
P16	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	38.575	-28.55	-32.00	3.45
P17	2.50	2.20	3.45	-7.800	+8.450	2250	+6.275	45.775	-35.35	-39.50	4.15
P18	2.50	2.20	3.45	-7.500	+8.750	2250	+6.575	49.735	-41.04	-43.16	2.12
P19	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	41.875	-33.19	-35.30	2.11
P20	2.50	2.20	3.45	-7.500	+8.750	2250	+6.575	50.185	-41.46	-43.61	2.15
P21	2.50	2.20	3.45	-6.000	+8.750	2250	+6.575	50.055	-41.36	-43.48	2.12
P22	2.50	2.20	3.45	-8.500	+8.750	2250	+6.575	56.695	-48.02	-50.12	2.10
P23	2.50	2.20	3.45	-5.750	+8.750	1500	+7.325	51.775	-42.35	-44.45	2.10
P24	2.50	2.20	3.45	-7.750	+8.750	1500	+7.325	56.985	-49.61	-51.66	2.05

PILE MARK	REINFORCEMENT SCHEDULE			PILE LOADS															
	MAIN BARS	LINKS	TYPE	GRAVITY LOAD, KN		WIND LOAD, AXIAL, KN				COMBINED LOADS, KN						MAX PILE LOAD, KN		ALLOW. PILE LOAD, KN		PILE BEARING CAPACITY AT PILE SHAFT
	D	S1	1/2	DL	LL	P-WLX	P-WLY	P-WLD1	P-WLD2	DL+LL	DL+LL+WL	DL+LL-WL	0.95DL+WL	0.95DL-WL	DL-1.5WL	W/O WIND	W/ WIND	W/O WIND	W/ WIND	
P1	50T40	T16-300	1	33568	7526	1992	-5683	-3652	-7913	41094	49007	33181	39803	23977	21699	41094	49007	*46741	*58426	63389
P2	40T40	T16-300	1	38989	8533	2234	6624	9202	4285	47521	56723	38319	46241	27837	25185	47521	56723	*59730	*74662	74244
P3	40T32	T16-300	1	39431	9024	766	-5685	-4992	-6588	48456	55044	41868	44048	30872	29550	48456	55044	*59730	*74662	69782
P4	22T32	T16-300	1	23951	5355	466	3388	3973	2930	29306	33279	25333	26727	18780	17991	29306	33279	*46741	*58426	52259
P5	22T32	T16-300	1	21286	4859	265	-2574	-2341	-2894	26145	29039	23252	23116	17328	16946	26145	29039	*46741	*58426	52259
P6	40T40	T16-300	1	41087	9134	416	4334	4867	3944	50221	55088	45354	43900	34165	33786	50221	55088	*59730	*74662	74244
P7	40T40	T16-300	1	34751	7525	1075	-2531	-1413	-3732	42276	46008	38544	36746	29281	29153	42276	46008	*46741	*58426	60290
P8	40T40	T16-300	1	34468	7125	999	2256	3373	1206	41593	44966	38220	36117	29372	29408	41593	44966	*46741	*58426	60290
P9	22T32	T16-300	1	21170	4082	1483	-3078	-1484	-4751	25251	30002	20501	24862	15361	14044	25251	30002	*46741	*58426	52259
P10	22T32	T16-300	1	28002	5672	1020	-2599	-1521	-3752	33674	37426	29922	30353	22850	22374	33674	37426	*46741	*58426	52259
P11	22T32	T16-300	1	29949	6028	490	-1325	-813	-1878	35977	37855	34100	30329	26574	27133	35977	37855	*46741	*58426	52259
P12	30T32	T16-300	1	31000	6059	544	1840	2454	1277	37059	39513	34605	31903	26996	27319	37059	39513	*46741	*58426	53846
P13	22T32	T16-300	1	29128	5389	837	2641	3579	1777	34517	38096	30938	31250	24093	23760	34517	38096	*46741	*58426	52259
P14	30T32	T16-300	1	18514	3196	-1327	-5994	-7551	-4634	21711	29261	14160	25139	10038	7188	21711	29261	*46741	*58426	53846
P15	22T32	T16-300	1	24299	4296	-1037	-3418	-4600	-2341	28595	33195	23996	27684	18485	17400	28595	33195	*46741	*58426	52259
P16	22T32	T16-300	1	28769	5380	-904	-1394	-2390	-434	34149	36539	31759	29720	24941	25184	34149	36539	*46741	*58426	52259
P17	22T32	T16-300	1	28528	5444	-767	1845	1041	2703	33972	36675	31269	29805	24399	24473	33972	36675	*46741	*58426	52259
P18	22T32	T16-300	1	25537	4563	-818	3359	2521	4299	30101	34400	25802	28560	19961	19089	30101	34400	*46741	*58426	52259
P19	22T32	T16-300	1	23895	4366	-1604	-1211	-2954	507	28261	31214	25307	25654	19747	19465	28261	31214	*46741	*58426	52259
P20	22T32	T16-300	1	24210	4606	-1563	1582	-90	3298	28816	32113	25518	26297	19702	19264	28816	32113	*46741	*58426	52259
P21	22T32	T16-300	1	20901	4095	-2336	-885	-3408	1628	24997	28404	21589	23264	16449	15790	24997	28404	*46741	*58426	52259
P22	22T32	T16-300	1	22601	4550	-2294	968	-1517	3464	27151	30615	23687	24935	18007	17405	27151	30615	*46741	*58426	52259
P23	22T32	T16-300	1	20044	4024	812	2707	3603	1877	24068	27672	20465	22645	15438	14639	24068	27672	*46741	*58426	52259
P24	22T32	T16-300	1	16752	3137	-748	4835	4111	5720	19889	25609	14169	21634	10194	8172	19889	25609	*46741	*58426	52259

NOTE: * DENOTE THE CAPACITY OF PILE CONTROLLING CASES; PILE BASE CAPACITY W/ WIND = 1.25 x PILE BASE CAPACITY W/O WIND

NOTES

1. ALLOWABLE PILE LOADS SHOWN ARE LIMITS FOR SERVICE LOADS.
2. -ve SIGN OF WIND AXIAL LOAD DENOTES TENSION.
3. THE X,Y,Z, AXES SHOWN ARE THE POSITIVE DIRECTIONS OF THE GLOBAL COORDINATE SYSTEMS. LOADS WITH NEGATIVE MAGNITUDES ARE ACTING OPPOSITE WITH RESPECT TO THE REFERENCE COORDINATE SYSTEM.
4. THE PILE LOADS SHOWN ABOVE ARE BASED ON SERVICE CONDITION. THE TABLE BELOW CONSIDERS AN ADDITIONAL LOAD FROM PILE CAP = 54 KPa, SOIL = 28.50 KPa
5. PILE LOADS LOAD FROM WIND CASES ARE REVERSIBLE.
6. BELL-OUT DIAMETER SHALL NOT EXCEED 1.5 TIMES THE NOMINAL DIAMETER OF THE PILE MINUS 0.2 (=1.5*D-0.2)
7. NOMINAL SHAFT DIAMETER SPECIFIED ON THIS DRAWING SAME AS OVERALL SHAFT DIAMETER OF TEMPORARY CASING DENOTED ON DRAWING YL39/1FDNS/ES0303.
8. EFFECTIVE SHAFT DIAMETER SPECIFIED ON THIS DRAWING SAME AS MINIMUM SHAFT DIAMETER ON PORTION WITH PERMANENT LINER DENOTED ON DRAWING YL39/1FDNS/ES0303.

REVISIONS

NO	DESCRIPTION AND DATE	DWN	CKD	AUTH
A	BORED PILE SCHEDULE REVISED (05/11)	JM	HW	FL
B	BORED PILE SCHEDULE REVISED (06/11)	JM	HW	FL
C	WING C GF LAYOUT REVISED (06/11)	JM	HW	FL
D	BORED PILE SIZE REVISED (09/11)	JM	HW	FL
E	ROCK SOCKET LENGTH REVISED (11/11)	JM	HW	FL
F	PILE FOUNDING LEVEL REVISED (01/12)	JM	HW	FL
G	2ND ICU AMENDMENT (02/12)	JM	HW	FL
H	ICU COMMENT ADDED (07/12)	JM	HW	FL

INITIAL AND DESIGNATION

	NAME AND POSITION	INITIAL	DATE
AUTHORIZED FOR ISSUE BY PO	CH PAK CSE/2	ORIGINAL SIGNED	04/11
AUTHORIZED	CK FUNG DESIGN DIRECTOR	ORIGINAL SIGNED	04/11
ENDORSED	FRANCIS LEUNG SDP	ORIGINAL SIGNED	04/11
CHECKED	HENRY WONG DP	ORIGINAL SIGNED	04/11
DRAWN	JO MOK STO	ORIGINAL SIGNED	04/11

WSP HONG KONG LIMITED

PROJECT
CONSTRUCTION OF PUBLIC RENTAL HOUSING DEVELOPMENT AT HUNG SHUI KIU AREA 13 PHASES 1 AND 2

DRAWING TITLE
BLOCK 4 PILE SCHEDULE

SCALE
As indicated

DRAWING NO.
YL39 / 2 / BLK4 / S / EF002 / H

SOURCE

ICU NO.

HOUSING DEPARTMENT

COPY FOR

U:\BIM\J2615-BIM-001 Hung Shui Kiu Area 13 Phase 2 (CB2010009)\CAD\Revit\J2490 BLK 4.rvt

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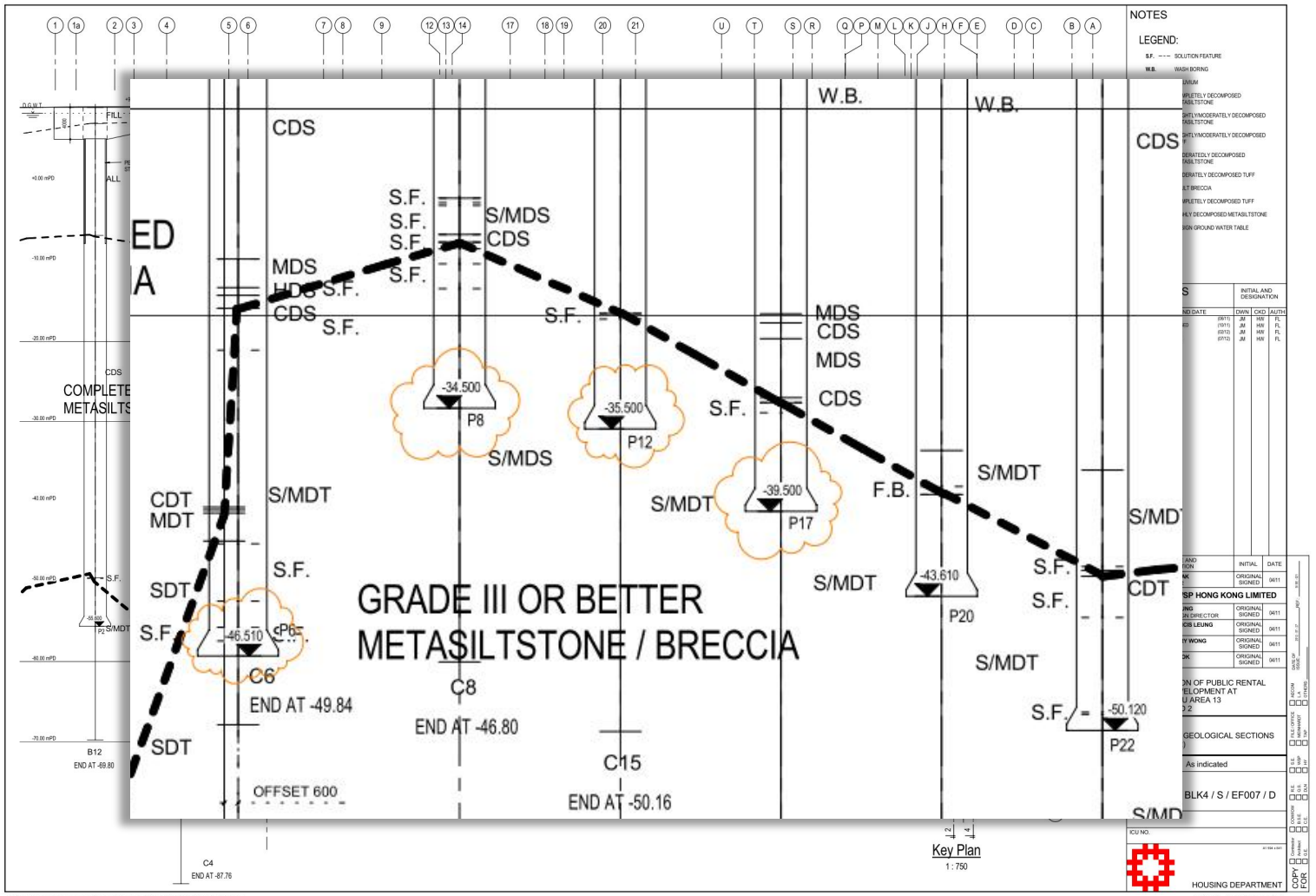
HONG KONG ALLIANCE OF BUILDING ASSETS & ENVIRONMENT INFORMATION MANAGEMENT ASSOCIATIONS

With BIM …

BORED PILE SCHEDULE											
PILE MARK	NOMINAL SHAFT DIAMETER (M)	EFFECTIVE SHAFT DIAMETER (M)	BELLOUT DIAMETER (M)	LINING TIP LEVEL (mPD)	CAP TOP LEVEL (mPD)	CAP THK (mm)	CUT OFF LEVEL (mPD)	PILE LENGTH (M)	TENTATIVE BEDROCK LEVEL (mPD)	TENTATIVE FOUNDING LEVEL (mPD)	SOCKET LENGTH (M)
P1	2.50	2.20	3.45	-5.750	+9.250	4000	+5.325	54.715	-41.55	-49.39	7.84
P2	2.80	2.50	3.90	-7.750	+9.250	4000	+5.325	60.925	-50.07	-55.60	5.53
P3	2.80	2.50	3.90	-8.001	+9.250	3000	+6.325	50.365	-39.20	-44.04	4.84
P4	2.50	2.20	3.45	-9.750	+9.250	3000	+6.325	76.655	-67.88	-70.33	2.45
P5	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	88.715	-35.49	-82.14	46.65
P6	2.80	2.50	3.90	-16.054	+8.750	2250	+6.575	53.085	-41.56	-46.51	4.95
P7	2.50	2.20	3.45	-9.500	+8.750	2250	+6.575	39.575	-26.93	-33.00	6.07
P8	2.50	2.20	3.45	-8.500	+8.750	2250	+6.575	41.075	-28.60	-34.50	5.90
P9	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	34.275	-23.46	-27.70	4.24
P10	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	35.075	-25.44	-28.50	3.06
P11	2.50	2.20	3.45	-9.000	+8.750	2250	+6.575	39.075	-28.46	-32.50	4.04
P12	2.50	2.20	3.45	-7.000	+8.750	2250	+6.575	42.075	-31.46	-35.50	4.04
P13	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	44.575	-34.69	-38.00	3.31
P14	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	34.505	-25.83	-27.93	2.10
P15	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	34.875	-25.38	-28.30	2.92
P16	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	38.575	-28.55	-32.00	3.45
P17	2.50	2.20	3.45	-7.800	+8.450	2250	+6.275	45.775	-35.35	-39.50	4.15
P18	2.50	2.20	3.45	-7.500	+8.750	2250	+6.575	49.735	-41.04	-43.16	2.12
P19	2.50	2.20	3.45	-8.000	+8.750	2250	+6.575	41.875	-33.19	-35.30	2.11
P20	2.50	2.20	3.45	-7.500	+8.750	2250	+6.575	50.185	-41.46	-43.61	2.15
P21	2.50	2.20	3.45	-6.000	+8.750	2250	+6.575	50.055	-41.36	-43.48	2.12
P22	2.50	2.20	3.45	-8.500	+8.750	2250	+6.575	56.695	-48.02	-50.12	2.10
P23	2.50	2.20	3.45	-5.750	+8.750	1500	+7.325	51.775	-42.35	-44.45	2.10
P24	2.50	2.20	3.45	-7.750	+8.750	1500	+7.325	58.985	-49.61	-51.66	2.05

With BIM …

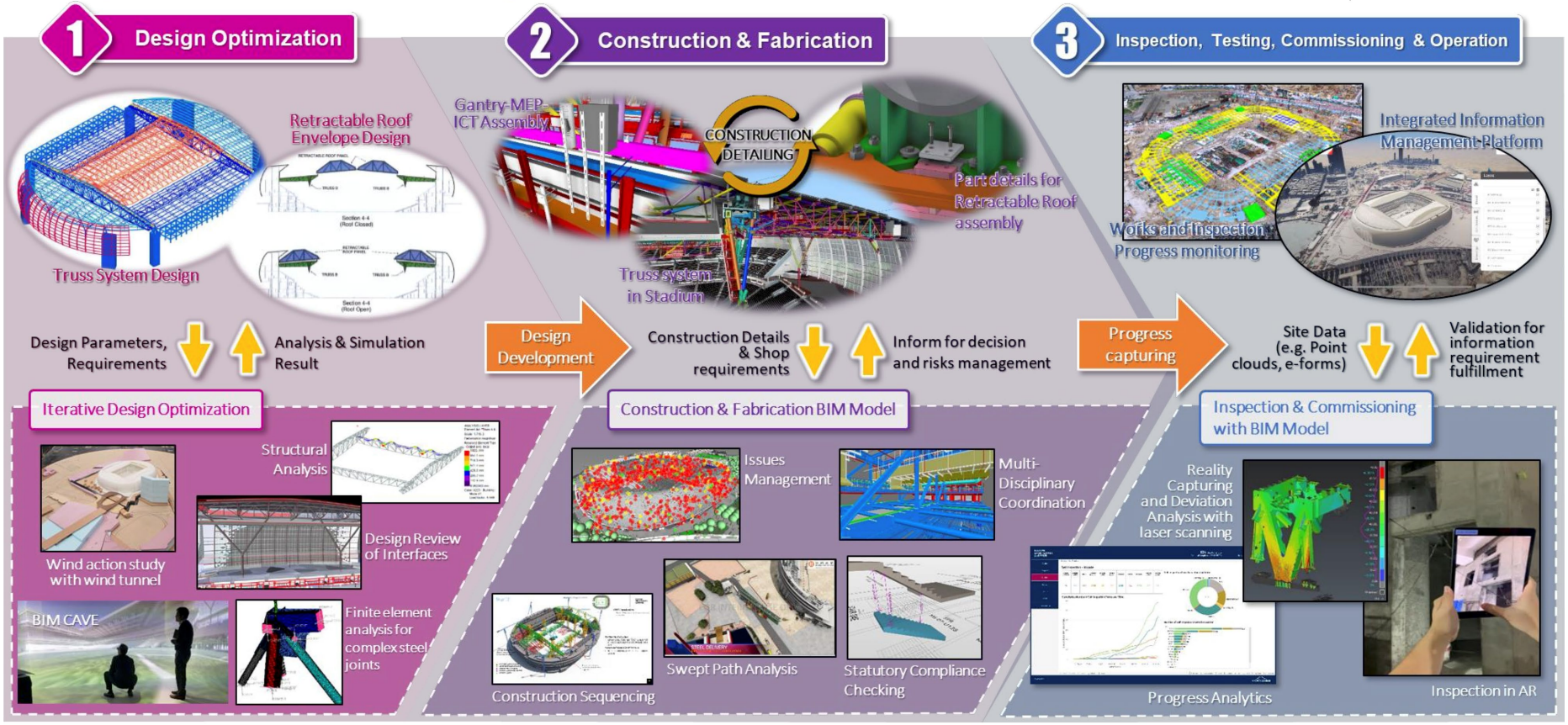

GRADE III OR BETTER
METASILTSTONE / BRECCIA
CDS
MDS
CDT
MDT
SDT
S/MDS
S/MDT
S.F.
W.B.
F.B.
P8
P12
P17
P20
P22
P6
C6
C8
C15
C4
B12
END AT -49.84
END AT -46.80
END AT -50.16
END AT -87.76
OFFSET 600
-34.500
-35.500
-39.500
-43.610
-46.510
-50.120
NOTES
LEGEND:
Key Plan
1 : 750
HOUSING DEPARTMENT

With BIM …

Kai Tak Sports Park

KAI TAK
SPORTS PARK
啟德體育園

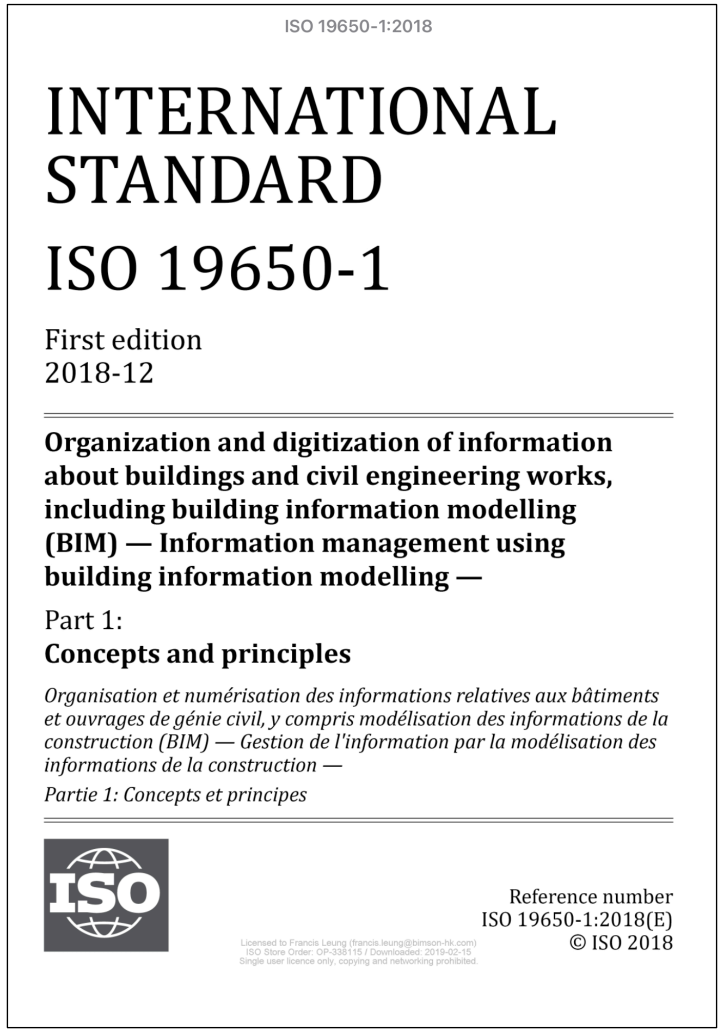
Digital Technology Adopted



Technology ring is closed

Management ring …

ISO 19650-1 Concepts and principles



ISO 19650-1:2018

INTERNATIONAL STANDARD

ISO 19650-1

First edition
2018-12

Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling —

Part 1:
Concepts and principles

Organisation et numérisation des informations relatives aux bâtiments et ouvrages de génie civil, y compris modélisation des informations de la construction (BIM) — Gestion de l'information par la modélisation des informations de la construction —

Partie 1: Concepts et principes

ISO

Reference number
ISO 19650-1:2018(E)
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- Asset and project information, perspectives and collaborative working
- Definition of information requirements and resulting information models
- The information delivery cycle
- Project and asset information management functions
- Delivery team capability capacity
- Information container-based collaborative working
- Information delivery planning
- Managing the collaborative production of information
- Common data environment (CDE) solution and workflow

Information Management …

Key

A start of delivery phase — transfer of relevant information from AIM to PIM

B progressive development of the design intent model into the virtual construction model (see 3.3.10, Note 1 to entry)

C end of delivery phase — transfer of relevant information from PIM to AIM

Figure 3 — Generic project and asset information management life cycle

BIM is only the
Information Container
in the
Information Management
Life-cycle

Information Management …

Key

A start of delivery phase — transfer of relevant information from AIM to PIM

B progressive development of the design intent model into the virtual construction model (see 3.3.10, Note 1 to entry)

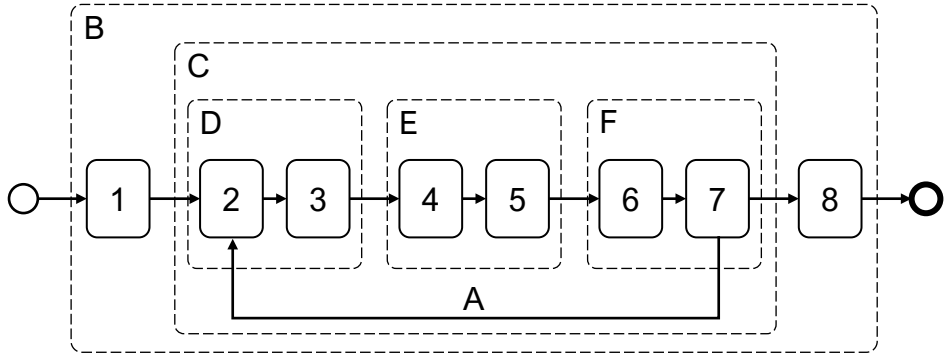
C end of delivery phase — transfer of relevant information from PIM to AIM

Figure 3 — Generic project and asset information management life cycle

ISO 19650-1:2018

ISO 19650-2:2018

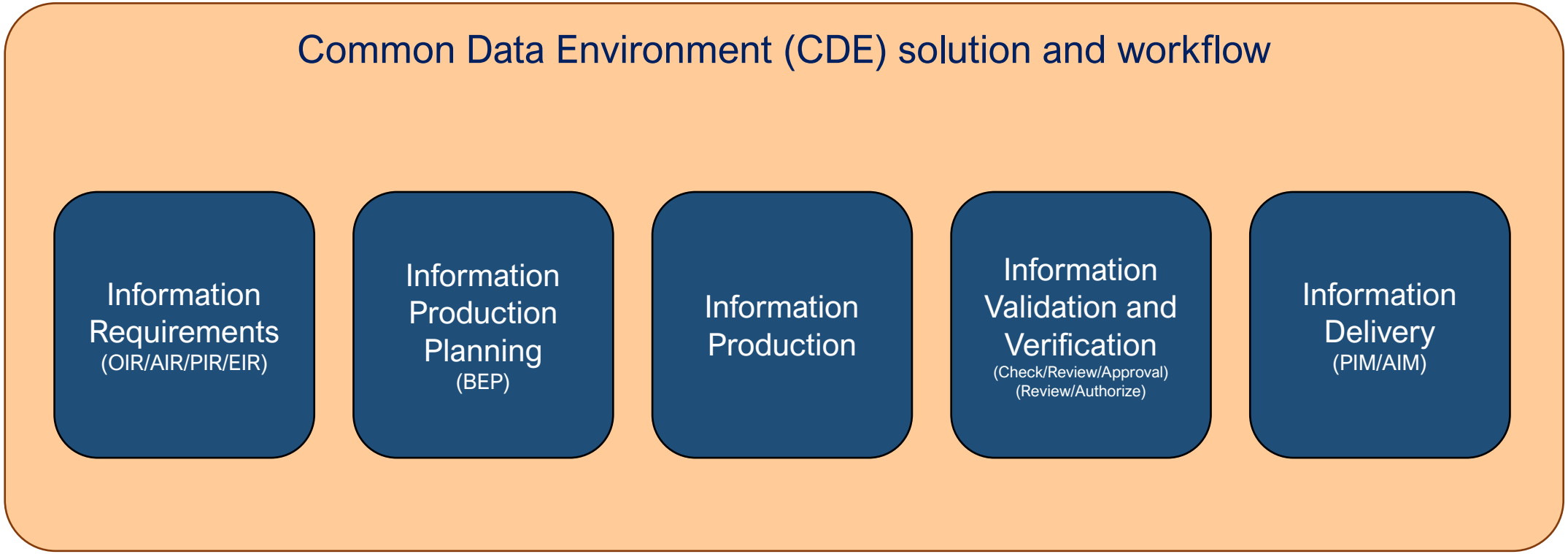
Figure 3 – Information management asset during the delivery phase of assets



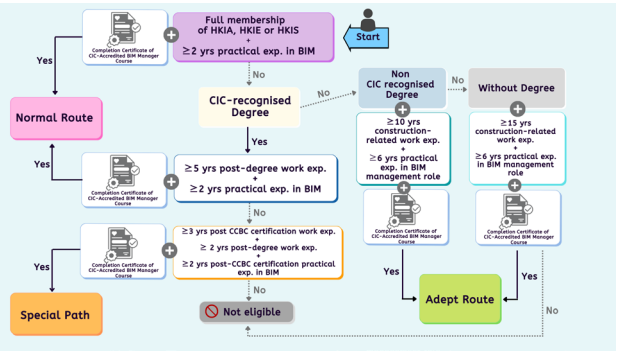
1. Assessment and need
2. Invitation to tender
3. Tender response
4. Appointment
5. Mobilization
6. Collaborative production of information
7. Information model delivery
8. Project close-out (end of delivery phase)

A. Information model progressed by subsequent delivery team(s) for each appointment
B. Activities undertaken per project
C. Activities undertaken per appointment
D. Activities undertaken during the procurement stage (of each appointment)
E. Activities undertaken during the information planning stage (of each appointment)
F. Activities undertaken during the information production stage (of each appointment)

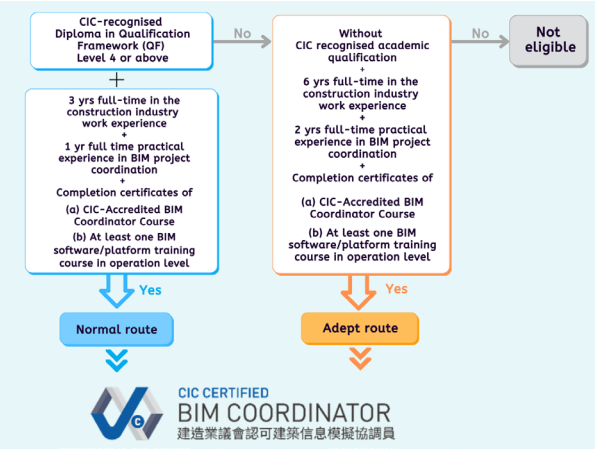
Information Management Process



CIC CCBM & CCBC



CIC CERTIFIED
BIM MANAGER
建造業議會認可建築信息模擬經理



CIC CERTIFIED
BIM COORDINATOR
建造業議會認可建築信息模擬協調員

Management ring is closed

Contractual ring …

BIM ☞ For reference only

06 제철과일 GWA-IL 鮮果盆
Seasonal Fresh Fruit

或 OR

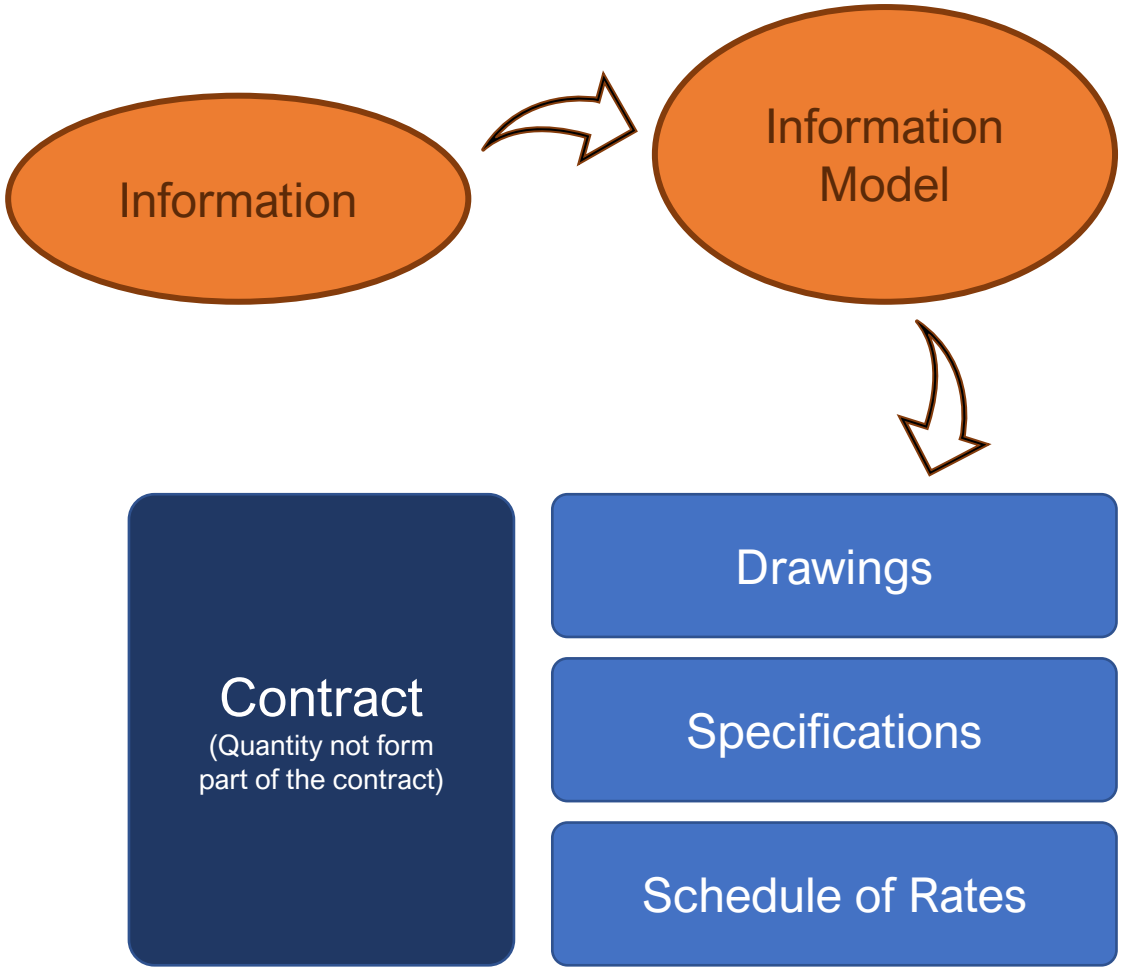
망고빙수 MANGO BINGSOO(S) 芒果雪花冰 (細)
Mango Sherbet

或 OR

팥빙수 BINGSOO(S) 紅豆雪花冰 (細)
Red Bean Sherbet

圖片只供參考 / 另收加一服務費 PHOTO FOR REFERENCE ONLY / PLUS 10% SERVICE CHARGE
如果客人要求更改項目，須付額外費用。（更改菜單項目只限一款） EXTRA CHARGES APPLY IF CUSTOMER WANTS TO CHANGE ITEMS (ONLY ONE ITEM CAN BE CHANGE)

But information in BIM to produce drawings is contractual



if we put information in "Information Model" to produce drawings and if drawings are part of the contract, what is the reason that we cannot include "Information Model" as part of the contract?

as far as I understand that drawings are tangible which can be well defined

whereas information model is not tangible which cannot be well defined

tangible and also "Human Readable"

and thus we use an alternative that all drawings should be produced from model and all the drawings produced from the model shall form part of the contract

> tangible and also "Human Readable"

yes if you have a trustable 3rd party software

which can verify and certify two identical models

then model can format part of the contract

so u may consider to put a model into a blockchain

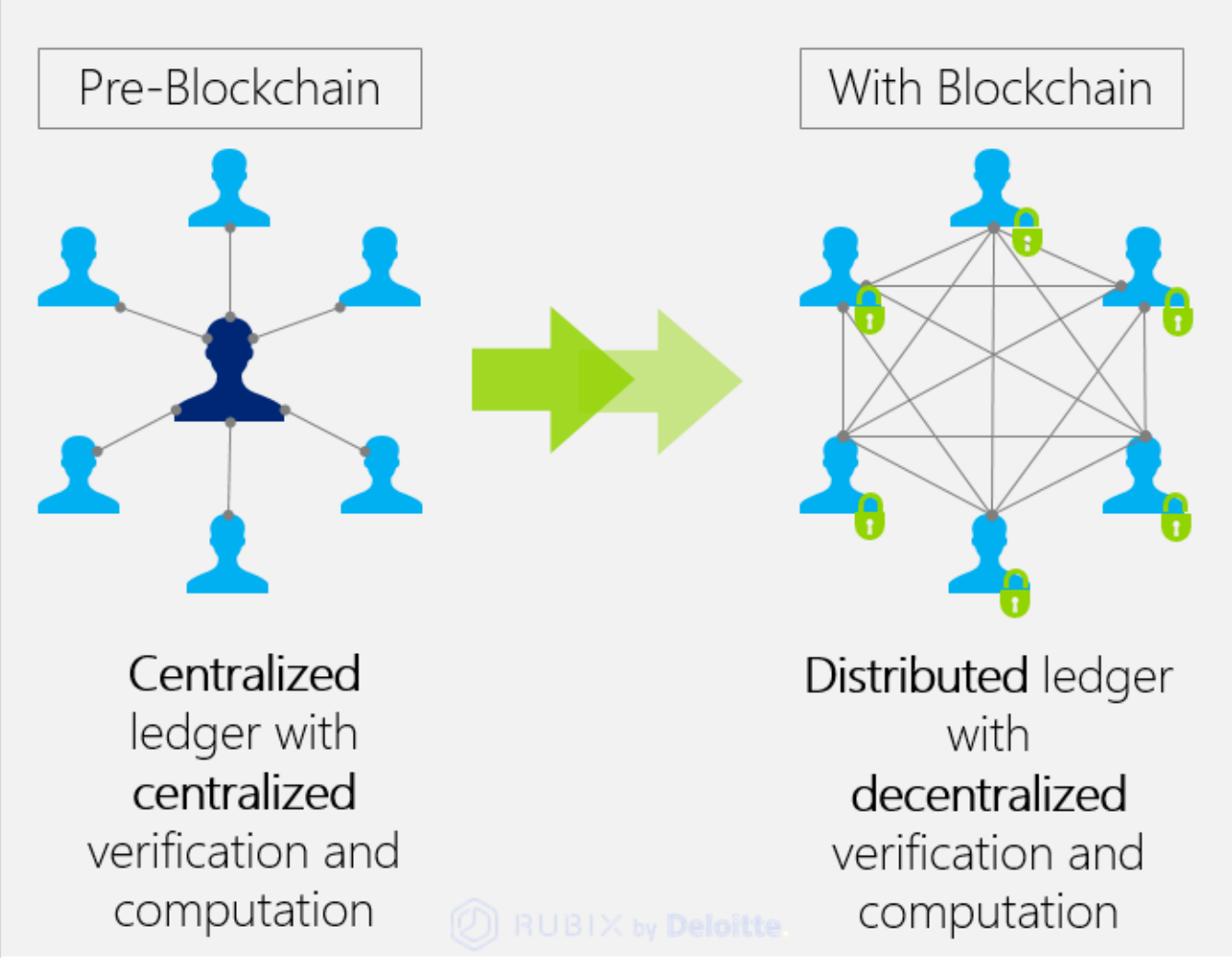
the model in the blockchain may be a good way to overcome this

what if there is an independent body to handle a certified copy of the model then in case if there is a dispute that "stamped" copy is used?

yes it is also a good idea

Drawings (Documentation)	Information Model
Human Readable	Human ~~Readable~~ — openBIM ✓
Tangible	Tangible ~~Tangible~~ — CDE solution and workflow ✓
Certifiable & Verifiable	Certifiable ~~Certifiable~~ — 3rd Party / Independent body ???
	Blockchain ???

Blockchain: decentralisation



Blockchain expert:
“You need a community to enable the decentralisation”

HKABAEIMA Members (55) representing more than 50,000+ people

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GRAPHISOFT A NEMETSCHEK COMPANY
CivilConnect Limited 譽鋒顧問有限公司 Software Powers the Engineer
俊和建築工程有限公司 Chun Wo Construction & Engineering Co., Ltd.
esri China HONG KONG
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P&T GROUP
Paul Y 保華建業 Paul Y. Engineering
RLB 利比 Rider Levett Bucknall
RONALD LU & PARTNERS
KunXiang Drawing Services Co., LTD.
LWK + PARTNERS
雲峰 Summit
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The Hong Kong Institute of Building Information Modelling 香港建築信息模擬學會 hong kong
香港仲裁師協會 Hong Kong Institute of Arbitrators
HKIUS 香港管綫專業學會 Hong Kong Institute of Utility Specialists

Supporting Organizations:
CIOB THE CHARTERED INSTITUTE OF BUILDING
cabe chartered association of building engineers Hong Kong Chapter
HONG KONG ALLIANCE OF BUILT ASSET & ENVIRONMENT INFORMATION MANAGEMENT ASSOCIATIONS

3rd Party / Independent Body

~~Government~~

~~Client Organisation~~

Hong Kong Alliance of Built Asset and Environment Information Management Associations

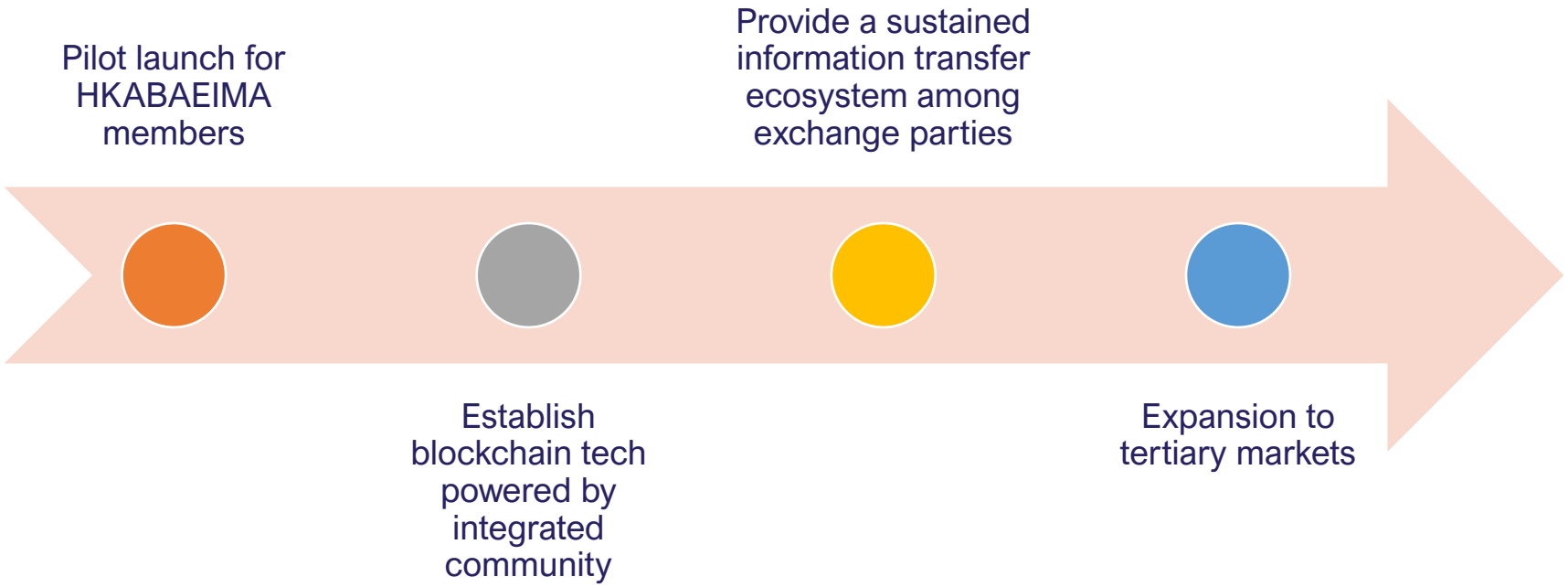
Hong Kong Information eXchange Centre

Technology

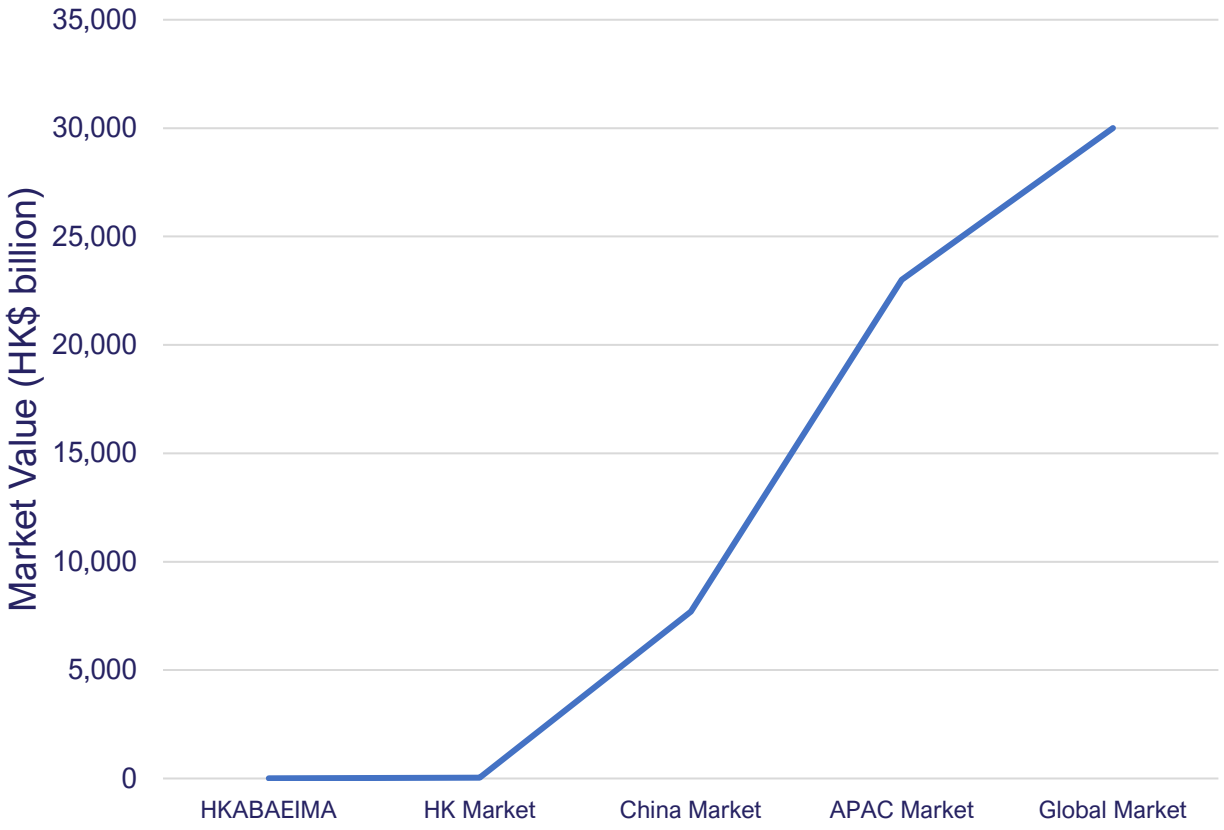
Management

Contractual

Conceptual Roadmap for Information eXchange Centre



Projected Market Value of Information eXchange Centre services



HK$ 30 Trillion Global Market*

Global information exchange (all industries) is much more*

*For reference only

Information Exchange Market Value Assumptions:

HKABAEIMA Market = HK$ 7B

Hong Kong Market US$17B (25% = 4B) = HK$ 30B

China Market US$ 4T (25% = 1T) = HK$ 7.7T

APAC Market US$ 13T (25% = 3T) = HK$ 23T

Global Market US$ 16T (25% = 4T) = HK$ 30T

Hong Kong Alliance of Built Asset & Environment Information Management Associations
香港建設資產及環境信息管理聯盟

buildingSMART Hong Kong

The idea of **Information eXchange Centre** Establishment

– Thank you –