

Construction Industry Transformation Programme 2016-2020

Sr. Noridah Shaffii, Programme Managament Office CITP, CIDB Malaysia JKR Seminar on Driving Excellence with IBS Institut Sosial Malaysia, Kuala Lumpur, 29 September 2016

KEY CONTEXTS MALAYSIAN CONSTRUCTION INDUSTRY



> RV680bin project value awarded (RMKe-10) **Increase 8% per annum**



Projects by Sector 2015 Statistics

Social Amenities Residential Non-residential Infrastructure

Private sector

82% 5,408 projects

Public sector

18% 1,839 projects

Source : CIDB Malaysia



Weight of the second second

Registered workers

Includes professionals

120F Industries'



Rely on CONSTRUCTION INDUSTRY



KVMRT

Sungai Buloh – Kajang, Sungai Buloh – Serdang – Putrajaya and LRT3

Pan Borneo Highway (2,239km in Sabah and Sarawak)

Highways (Kota Bharu – Kuala Krai)

Power Plants

(Perak, Johor, Penang, NS)

High Speed Rail

(Kuala Lumpur – Singapura)

Central Spine Road

(Kuala Krai – Simpang Pelangai, Pahang)

New Hospitals

(Kemaman, Bentong, Baling, Pendang, Pasir Gudang dan Maran)

Construction Projects Eleventh Plan (2016-2020)





MALAYSIA

www.citp.my

CONSTRUCTION INDUSTRY TRANSFORMATION PROGRAMME 2016 - 2020

Driving Construction Excellence Together

20 Initiatives	9 Thrust KPIs	110 Initiative KPIs	
400+ Partners	15 CIDB S	15 CIDB Sponsors & Owners	





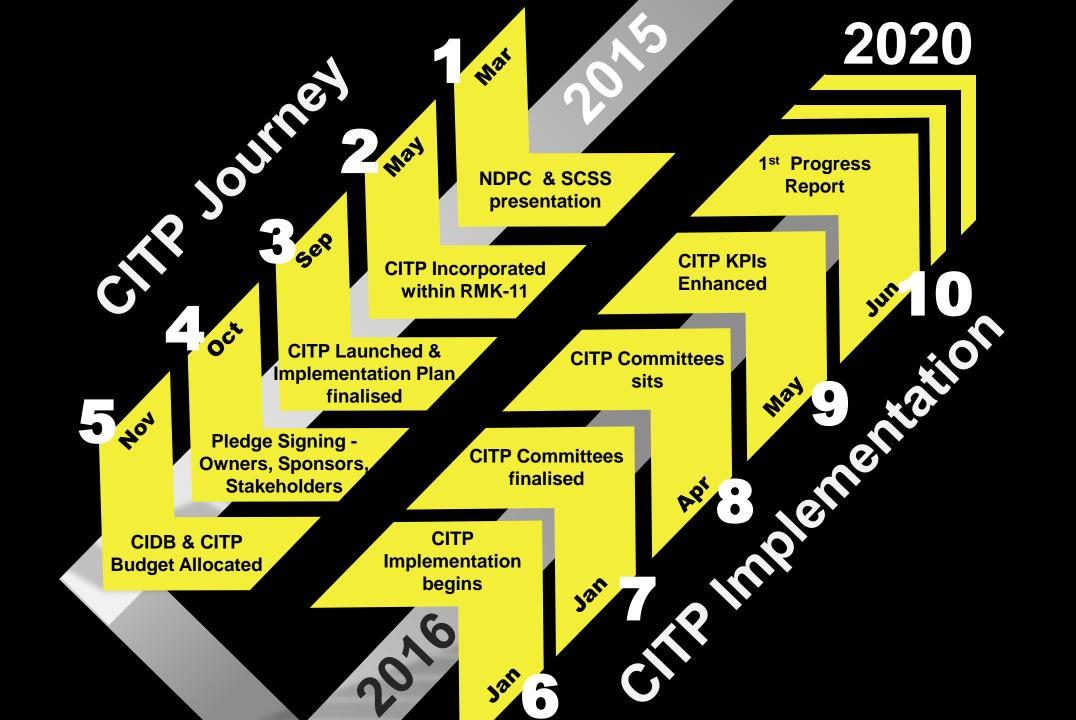
ENVIRONMENTAL SUSTAINABILITY



PRODUCTIVITY



INTERNATIONALISATION



Launching of CITP by the Prime Minister

14th International Construction Week, 10th September 2015





Chapter 8

Re-engineering economic growth for greater prosperity

Focus area D: Transforming construction

- Strategy D1:Enhancing knowledge content
- Strategy D2: Driving productivity
- Strategy D3: Fostering sustainable practices
- Strategy D4: Increasing internationalisation

"The Government will introduce the Construction Industry Transformation Programme (CITP), 2016-2020, to propel the industry forward and meet market demand."

Criticality of construction industry and CITP recognised within 11th Malaysia Plan (RMKe-11)

Note: Further details in Strategy Paper 18 of RMK-11

HORING GROWTH ON PEOPLE

RMK-11 recognises importance of construction industry and CITP ... with a specific Focus Area within Chapter 8 of the document



Quality, Safety & Professionalism

Quality, Safety & Professionalism ingrained in industry culture

Environmental Sustainability

Malaysia's sustainable infrastructure : a model for the emerging world

Productivity

More than doubling productivity, matched by higher wages

Internationalisation

Malaysia champions : leading the charge locally and globally



THRUST





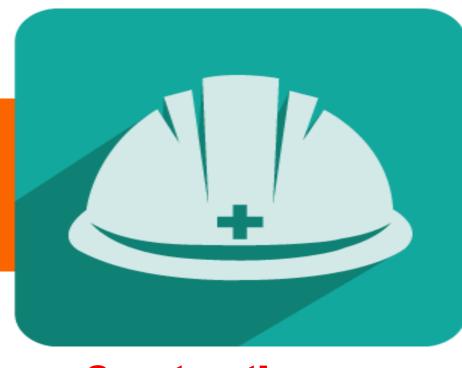
of buildings currently adopt QLASSIC¹

Very few quality-rated buildings



1. Quality Assessment System in Construction

High occupational deaths in construction



- Primary industries :42
 - Manufacturing :40
- Wholesale and retail trade : 6
- Public service & statutory bodies : 5
 - Professional services : 3
 - Mining and quarrying : 3



Delays in approval of permits

2014 World Bank Ease of Doing Business



days to obtain a construction permit in Malaysia

days in Singapore



5 Initiatives Under Thrust QUALITY, SAFETY & PROFESSIONALISM





Improve workplace safety and workers' amenities E: farrin@cidb.gov.my T: 03-4047 7374

Improve ease of doing business by addressing regulatory constraints E: ida@cidb.gov.my / zainora@cidb.gov.my Ext: 7404 / 7047

Promote and raise awareness of CITP initiatives E: noryani@cidb.gov.my T: 03-4047 7027

5 Enhance integrity and increase governance E: ramu@cidb.gov.my T: 03-4047 7263

OUTCOMES : Quality, Safety and Professionalism Quality, safety and professionalism ingrained in industry culture

50

Public projects exceed acceptable QLASSIC score Reduction in worksite fatalities and injuries

50%

Ease of Doing business indicator in dealing with construction permits improved

QUALITY, SAFETY & PROFESSIONALISM

27 Initiative KPIs to support 3 Thrust KPIs



ENVIRONMENTAL SUSTAINABILITY

THRUST 2

GDP : CO2 – eq. emissions in Malaysia among the lowest in the world

Singapore		\$3,700
Japan	:	\$3,100
Turkey	-	\$3,000
India	:	\$2,300

High carbon emission and energy usage of buildings

\$1,500

Only 2% of buildings and infrastructure rated

RM2.9 Bn

damage from recent floods on the East Coast of Malaysia

Natural disaster damage driven by lack of building / infrastructure resilience

RM800 Mn

for repair and reconstruction of schools, hospitals, roads and bridges Rapidly depleting capacity of landfills

Up to 40% of illegal dumped waste from construction and demolition



5 Initiatives Under Thrust ENVIRONMENTAL SUSTAINABILITY





Drive innovation in sustainable construction E: farrin@cidb.gov.my T: 03-4047 7374



Drive compliance to environmental sustainability ratings and requirements

E: farrin@cidb.gov.my

T: 03-4047 7374

EB

Focus on public projects to lead the charge on
sustainable practicesE: farrin@cidb.gov.myT: 03-4047 7374



Facilitate industry adoption of sustainable practicesE: farrin@cidb.gov.myT: 03-4047 7374



Reduce irresponsible waste during constructionE: farrin@cidb.gov.myT: 03-4047 7374

100% of large infrastructure projects exceed sustainability requirements

4 Mt CO2 equivalent reduction per year

OUTCOMES : Environmental Sustainability

Malaysia's sustainable infrastructure: a model for the emerging world

ENVIRONMENTAL SUSTAINABILITY

19 Initiative KPIs to support 2 Thrust KPIs



PRODUCTIVITY

THRUST 3

Over-reliance on low-skilled foreign labour

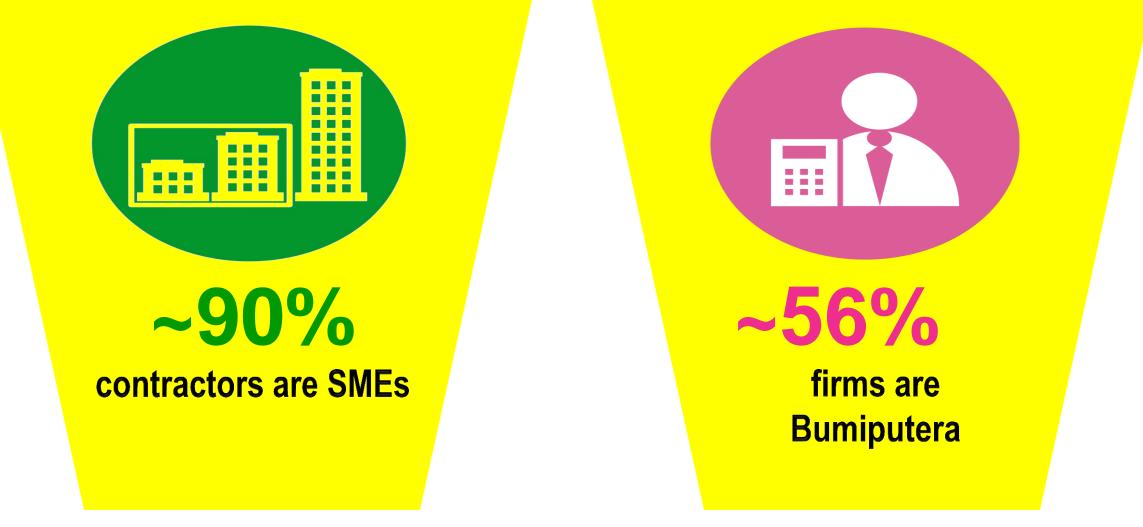


Largely unskilled workforce

Limited adoption of Industrialised Building System (IBS)



Achieved 70 IBS score Despite MOF circular



High proportion of subscale SMEs, including Bumiputera firms

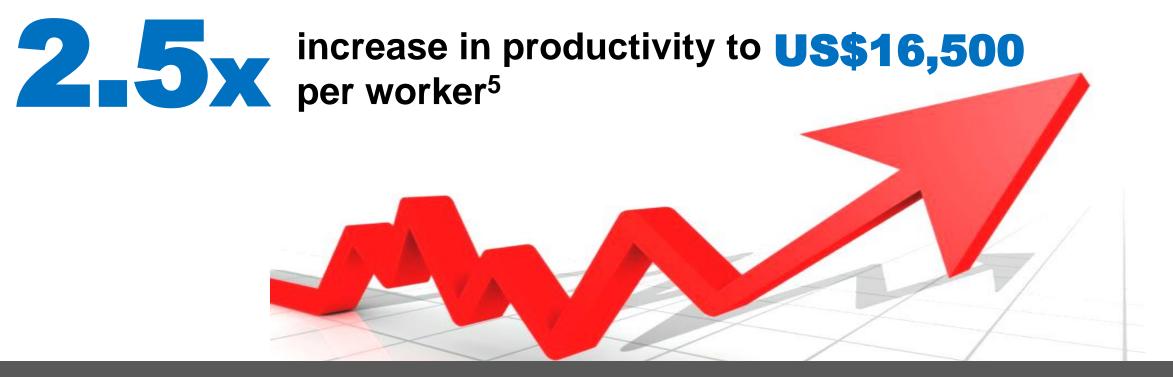
6 Initiatives Under Thrust PRODUCTIVITY



Roll out technology advantage across project lifecycle

E: noraini@cidb.gov.my T: 03-92816909

P1	1 Continue investment in human capital development in construction		Enhance availability of strategic information via National Construction Industry Information Centre		
	E: azizah@cidb.gov.my Ext: 7313		E: zainora@cidb.gov.my	Ext: 7354	
P2	Enhance control and balance of workforce supply	P6	Advance SME Bumiputera capacity and capability-building		
	E: jaiz@cidb.gov.my Ext: 7414		E: ibrahim@cidb.gov.my	Ext: 7323	
P3	Accelerate adoption of IBS, mechanisation and modern practices E: noraini@cidb.gov.my T: 03-92816909				



OUTCOMES : Productivity

More than doubling productivity, matched by higher wages

5. US\$16,500 is equivalent to RM 61,939 as stated in the 11th Malaysia Plan; 2.5x increase uses 2011 as a base as compared to 11th Malaysia Plan where 1.6x increase in labour productivity uses 2015 as a base. Both sets of numbers are consistent

PRODUCTIVITY

48 Initiative KPIs to support 1 Thrust KPI





INTERNATIONALISATION

THRUST 4

Increased need for Malaysian companies to hold ground against foreign competitors



Malaysian companies need to be ready for greater competition and scrutiny

New FTA1s planned (e.g., TPPA1) in addition to current 12

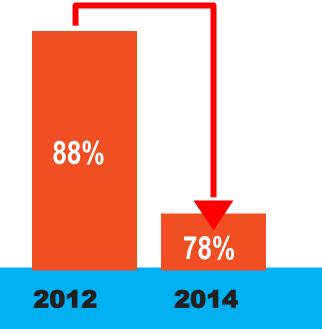
1.Trans-Pacific Partnership Agreement



Losing domestic market share to foreign companies

12% (2012)

vs 22% (2014)





~70% decrease in value of overseas projects won

Overseas projects won

RM5.8 Bn (2011)

VS

RM0.25 Bn (2014)

4 Initiatives Under Thrust



Internationalise construction practices and standards E: zainora@cidb.gov.my / sazali@cidb.gov.my Ext: 7047 / 7434

I2 Strengthen access to financing for Malaysian champions going abroad E: zainora@cidb.gov.my T: 03-4047 7047

I3 Support consortia formation and strengthen overseas market intelligence E: zainora@cidb.gov.my T: 03-4047 7047

Intensify contractor's capacity and capability building E: ibrahim@cidb.gov.my T: 03-4047 7323

OUTCOMES : Internationalisation

Malaysian champions: leading the charge locally and globally



companies achieve 5* SCORE rating

6X

increase in volume of overseas construction projects and construction related products secured by Malaysian companies by 2020

104

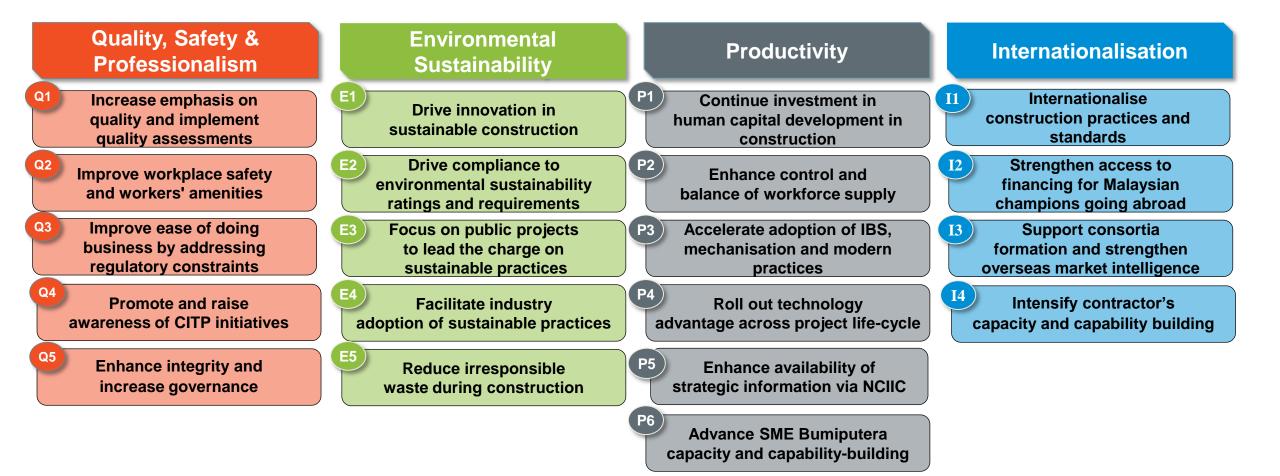
 $\mathbf{1}$

construction-related companies export construction services in the global market

INTERNATIONALISATION

16 Initiative KPIs to support 3 Thrust KPIs

20 CITP initiatives to transform the construction industry across 4 strategic thrusts



Enablers

Three Enablers drives the success of CITP Strong Coordination Body

Effective Industry Collaborations

Robust Governance

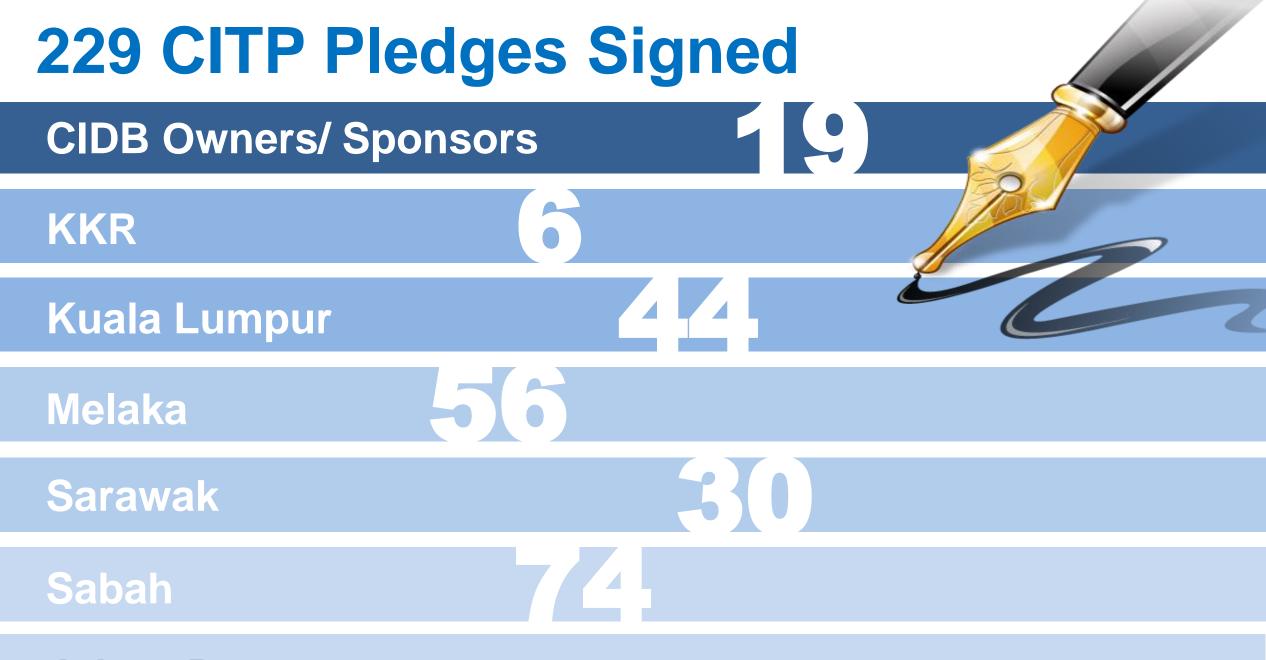
Effective Industry Collaborations

Driving Construction Excellence Together

Bersama-Sama Memacu Kecemerlangan Pembinaan

Public Sector

Private Sector



Johor, Penang



Pledges Signed by 5 KKR Agencies 3 September 2015



Pledges Signed by 24 industry captains at Sime Darby Convention Centre 26 October 2015



Pledges Signed by 77 industry players at Sabah 5 September 2016

229 key stakeholders have already pledged their support for CITP: many more to come

Non-exhaustive



1. Federation of Sabah Industries 2. Unit Perancang Ekonomi Negeri 3. Sabah Urban Development Corporation (SUDC) 4. Jabatan Pembangunan Sumber Manusia 5. MARA 6. Stanford University 7. Harvard University 8. UKM 9. Western Australia Skills Training 10. BNM 11. PAM 12. BQSM 13. IEM 14. MBAM Australia 15. BEM 16. LAM

Strong Coordination Body (PMO)

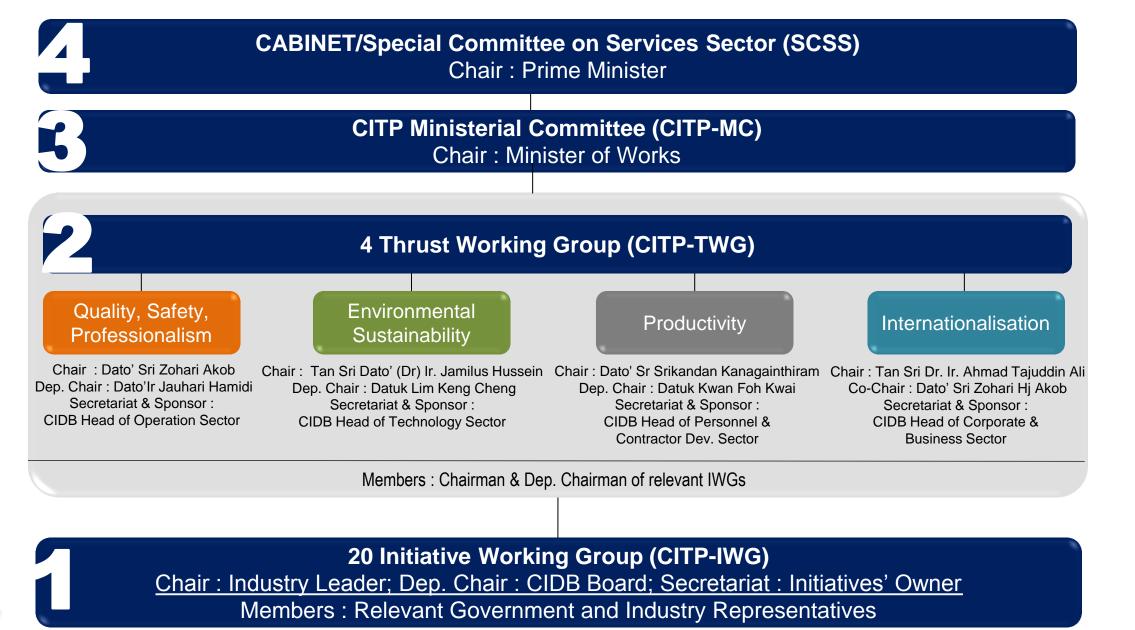
Programme Management Office (PMO) as the CITP coordinating body

Have <u>tools to jointly</u> <u>coordinate</u> CITP progress

Full-time committed to monitoring success of CITP Will assist stakeholders when needed

Robust Governance

CITP Governance Structure



NO

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Φ





IWG4 – Dealing with Construction Permit

IWG8 – Human Capital

IWG14 – SME Bumiputera



CITP Ministerial Committee (CITP-MC) 9 August 2016 BLK TERATAL

R

MAN.

M

MA



ROLES OF JKR IN CITP

PERANAN JABATAN KERJA RAYA

- Q1 Menggunapakai QLASSIC dalam penilaian kualiti pembinaan
- Q2 Melaksanakan keperluan kemudahan pekerja binaan di tapak bina
- Q2 Menerapkan OSH BQ di dalam dokumen tender projek JKR

- E1 Penglibatan aktif dalam program-program Pusat Kecemerlangan (CoE) Kemampanan
- E3 Memastikan kemampanan diterapkan dari peringkat perolehan
- E3 Meningkatkan usaha penggurangan emisi carbon dioksida melalui penggunaan pengukuran MyCREST
- E5 Meningkatkan usaha kitar semula sisa pembinaan



- P3 Meluaskan penerapan IBS berdasarkan KPI Inisiatif No.59, 61, 62, 63 & 67
- P4 Memastikan penerapan BIM dari peringkat rekabentuk sehingga ke penyelenggaraan berdasarkan KPI Inisiatif No.69, 70, 71 & 73



- I1 Mengguna pakai MSCESMM dalam projek
- I1 Mengguna pakai spesifikasi nasional pembinaan dalam projek
- I1 Memastikan penggunaan bahan binaan berkualiti mengikut standard di bawah Akta 520

Among the many ways JKR can contribute in transforming the industry under CITP include but not limited to:



JKR MEMBERSHIP IN CITP COMMITTEES

NO	NAME	COMMITTEE	NO	ΝΑΜΕ	COMMITTEE
1	Dato' Ir. Dr. Roslan Md. Taha	MC	10	Ir. Hj. Mohd Daud Harun	IWG11-BIM
2	Datuk Ir Adanan Mohamed Hussain	TWG4-I IWG15-NSSC	11	En. Abdul Rahman Ambari	IWG11-BIM
3	Ir. Haji Abu Harith Shamsuddin	TWG1-QSP	12	Sr. Abd Shukor Ibrahim	IWG12-N3C
4	En. Kamalaldin Abd. Latif	TWG2-ES IWG6-Sustainable Ratings IWG7-Sustainable Practices	13	Sr. Husnan Hussin	IWG12-N3C
5	Sr. Ratna Hj. Mahyuddin	TWG3 IWG12-N3C	14	Dr. Kamaluddin Hj. Abdul Rashid	IWG15-NSSC IWG16-Material Standard
6	Ir. Hajah Ruhani Haji Ali	IWG1-Quality	15	Ar. Zairul Azidin Badri	IWG15-NSSC
7	Ir. Zailan Ab Rahman	IWG2-Safety	16	Ir. Radzwan Kasim	IWG15-NSSC
8	Sr. Dr. Rozina Mohd Zafian	IWG3-Contractor Registration	17	Ir. Abd Rahman Salleh	IWG17-MSCESMM
9	Ir. Norma Norman	IWG10-IBS			

WHAT'S IN CITP FOR IBS?

Public projects RM10Mn and above achieved 70 IBS score

Private projects achieved 50 IBS score



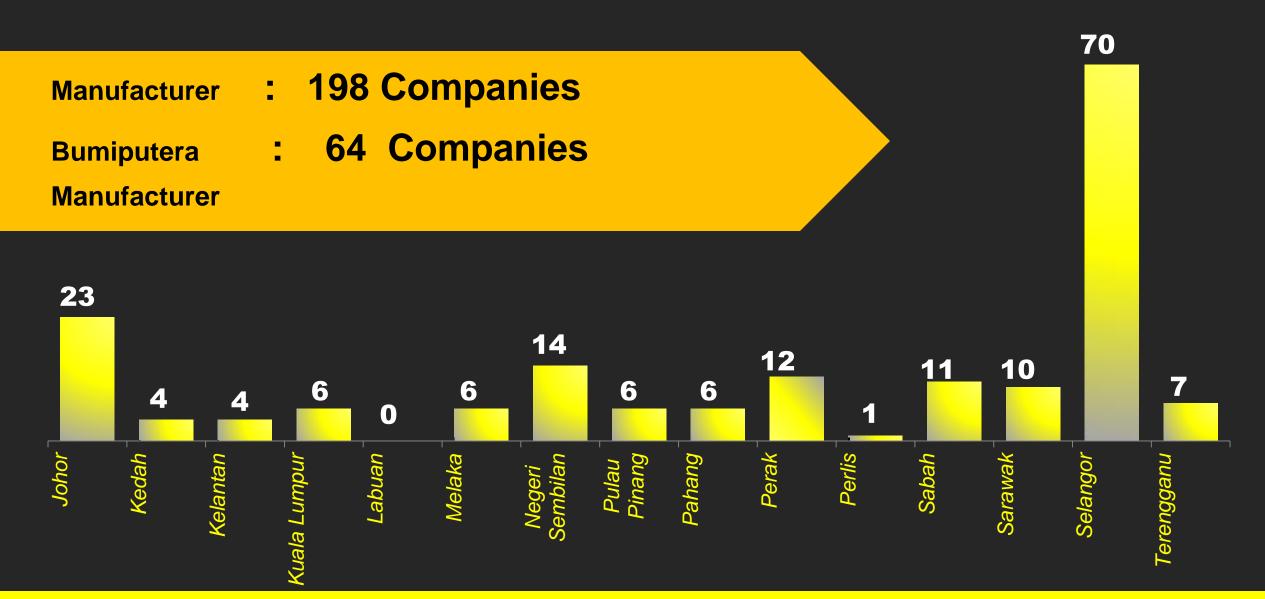
Limited regulatory impetus	01 Broad definition of IB standards		02 Limited enforcement of IBS requirement		
	Design Consultant	Contractor	Manufacturer		
Lack of strong market supply and demand forces	 03 Design consultants not fully equipped to incorporate IBS in their designs: Contractors forced to redesign with manufacturers thus leading to delays 04 Design consultants not adequately trained to incorporate IBS specifically, in the design for manufacturing and assembly or DFMA 	 05 Contractors need to improve effectiveness of project management to adopt just-intime practices and avoid delays 06 Deposit paid to manufacturers can result in cash flow issues for contractors 07 Limited number of IBS-ready contractors and workforce 08 Preference to use cast-in-situ method 09 Availability of low-cost foreign labours 	 Low demand means limited economies of scale: and few IBS manufacturers High import duty for IBS equipment and machinery, with limited IBS manufacturing incentives Sparsely located IBS manufacturers. especially in Sabah and Sarawak Relatively high cost of transportation for components and machinery 		

Vicious cycle makes IBS adoption challenging

- Lack of scale resulting in high IBS cost
- Ineffective project management by contractors, resulting in on-site problems
- SME contractors face cash-flow issue in IBS procurement
- Few IBS suppliers due to small market
- Low supply of IBS components at high price
- IBS plants mostly concentrated in developed states

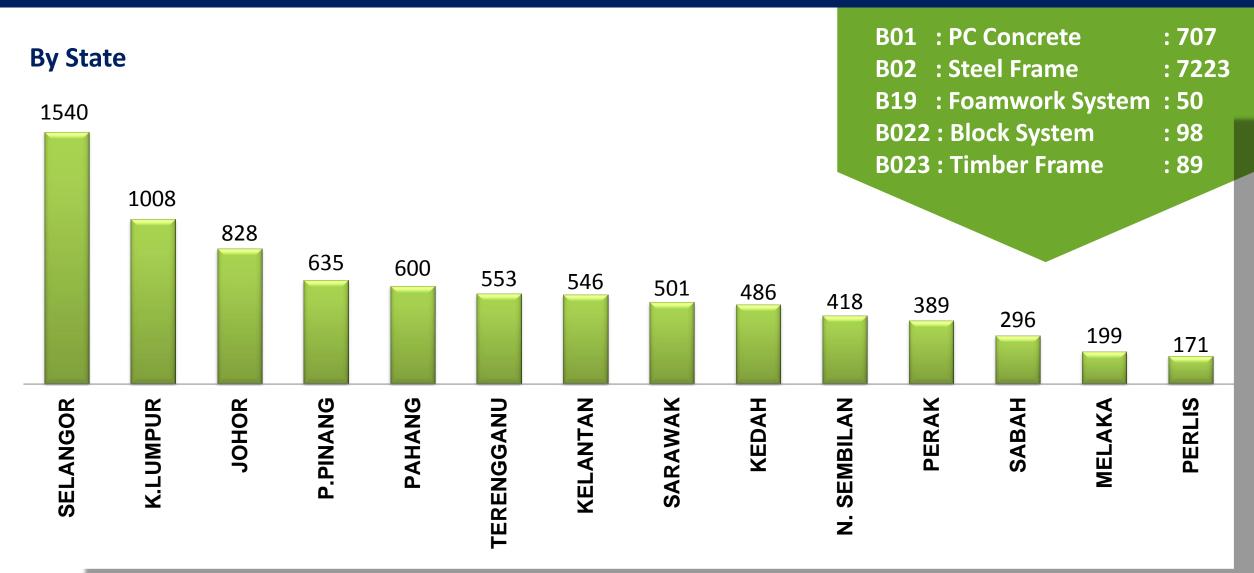
High cost in adopting IBS

- Small pool of IBS specialist available in design for manufacturing and installation
- Upfront payment and long lead time
- High capital cost in setting-up IBS Plants
- Duty on IBS equipment high



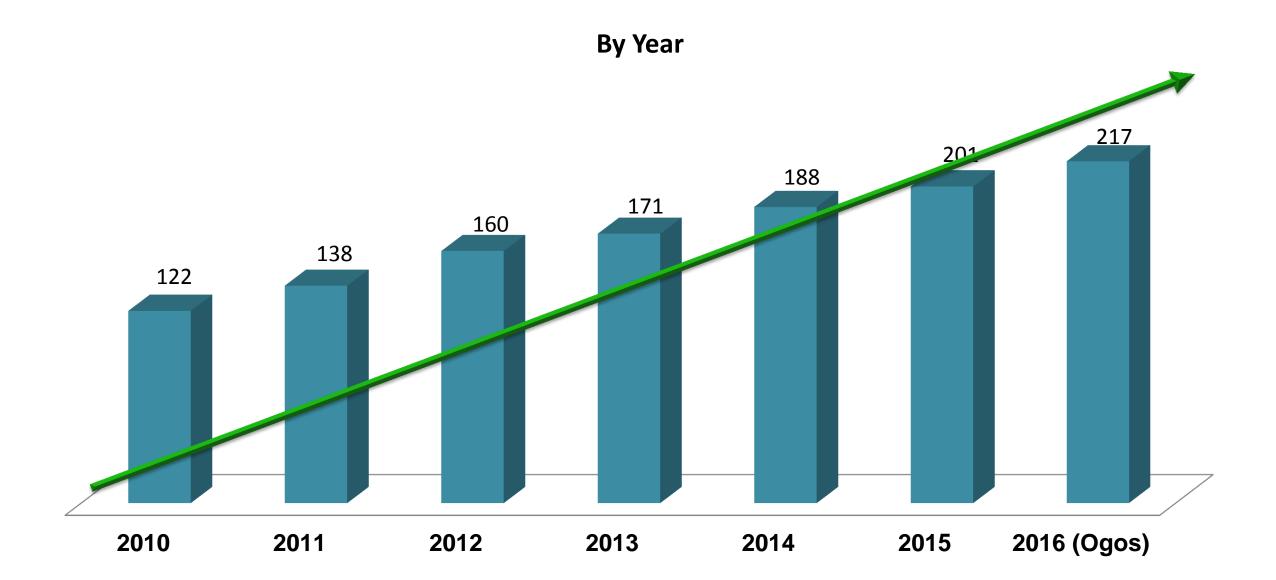
IBS Manufacturer Statistics (up to April 2015)

SPECIALISED IBS CONTRACTORS UP TO AUGUST 2016

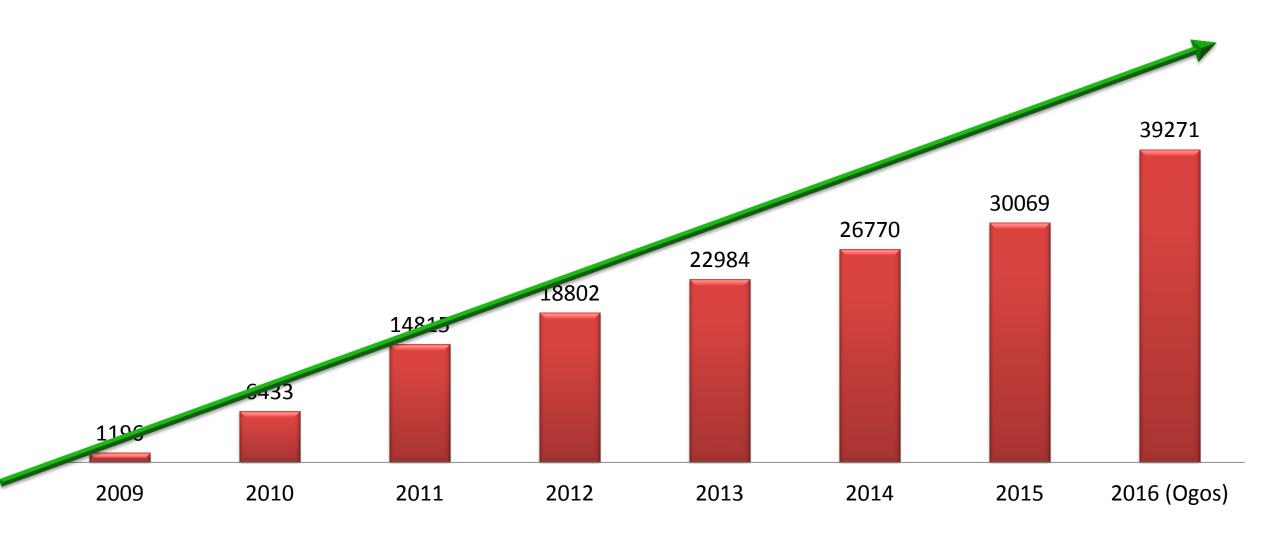


Total of IBS Contractors = 8170

REGISTERED IBS COMPONENT MANUFACTURERS ANNUALLY UP TO AUGUST 2016



IBS INSTALLERS UP TO AUGUST 2016



Accredited IBS Installers = 39,271 orang

Committee Name : CITP Initiative Working Group on Industrialised Building System

> **Committee Code :** CITP-IWG10/P3-IBS

CITP-IWG10/P3-IBS MEMBERSHIP





CHAIRMAN Dato' Azman Mahmud (CEO MIDA) DEPUTY CHAIRMAN Datuk AG Buhtamam AG Mahmun (CIDB BOD)

23 Members

13 GOVERNMENT REPRESENTATIVE

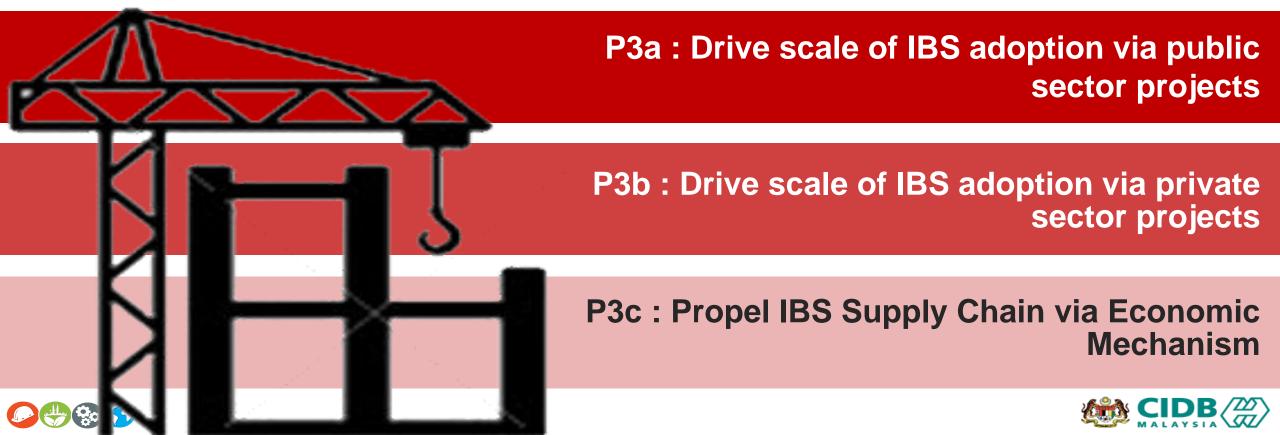
10 PRIVATE REPRESENTATIVE

CITP-IWG10/P3-IBS MEMBERSHIP

1	Dato' Azman Mahmud (Chairman)	13	Kow Choong Ming (SP Setia Berhad)
2	Datuk AG Buhtamam AG Mahmun (Dep.Chairman)	14	Foo Sheh Eem (IJM Construction S/B)
3	Fara Anwary (MoF)	15	Ir. Hooi Wing Chen (IEM)
4	Yusnizah Kusnin (ICU)	16	Ar. Abu Zarim Abu Bakar (PAM)
5	Azhar Abdul Manaf (MARA)	17	Sr. Hj Mohd Amin Mohd Din (RISM)
6	Hajah Rose Zairani Hj Marmuji (MBSA)	18	Dato' Ir. Soam Heng Choon (REHDA)
7	Ir. Norma Norman (JKR)	19	Dato' Othman Jaki (KUB Precast S/B)
8	Najihah Abas (MIDA)	20	Prof. Tan Sri Dato' (Dr) Ir. Jamilus Hussein
9	Ir. Kamar Kassim (KPKT)	21	Datuk Ir. Elias Ismail (SPONSOR -CIDB)
1	Prof. Dr Azmi Ibrahim (UiTM)	22	Ir. Noraini bahri (OWNER - CIDB)
1'	Ong Ka Thiam (MBAM)	23	Sr. Noridah Shaffii (PMO -CIDB)
12	Ir. Kamar Kassim (KPKT)		

Initiative P3

Accelerate adoption of IBS, mechanisation and modern practices



and collaborative partners

Drive scale of IBS adoption via public sector projects

KPIs

All IBS components (i.e. columns, beams & slabs) for public projects to be procured separately from main contracts by 2018

JKR and other Developing Agencies

60 Quarterly Report on status of IBS adoption, submitted by Implementation Coordination Unit (ICU-JPM) to Ministry of Finance (MOF) and Auditor General (AG) for action on noncompliance beginning 2016.

ICU-JPM, MOF, AG, JKR & Developing Agencies

All JKR Pre-Approved Plans (PAP) comply to IBS and Modular Coordination by 2017

JKR

62 All JKR and CIDB's IBS components catalogue harmonised and issued by 2017

JKR-CIDB

80% compliance to amended MOF Circular 1 PPK 1/2013 by 2018

All Ministries & Developing Agencies

Drive scale of IBS adoption via private sector projects

64 100% new Development Order in Greater Klang Valley for projects RM50 Mn and above achieved minimum 50 IBS Score by 2018

KPKT, LAs in Klang Valley

655 100% new Development Order by identified local authorities in three states (Selangor, Johor & Pulau Pinang) for projects RM50Mn and above achieved minimum 50 IBS Score by 2020

KPKT, Relevant LAs







Propel IBS Supply Chain via Economic Mechanisms

66 At least 100 more new IBS component manufacturing plants established at various strategic locations by 2020

MIDA, MARA, SME Bank, CIDB

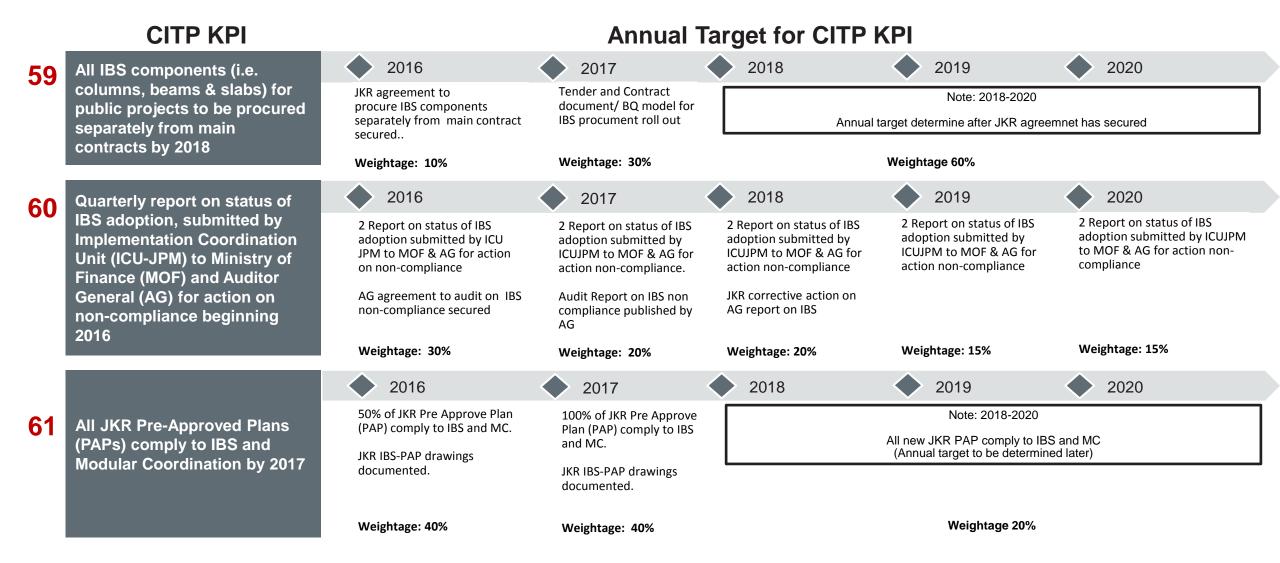
67 At least 5,000 professionals (engineers, architects & quantity surveyors) trained to apply IBS and modular coordination from design phase by 2020

JKR, Gov. Agencies, Prof. Association, MOHE, CIDB

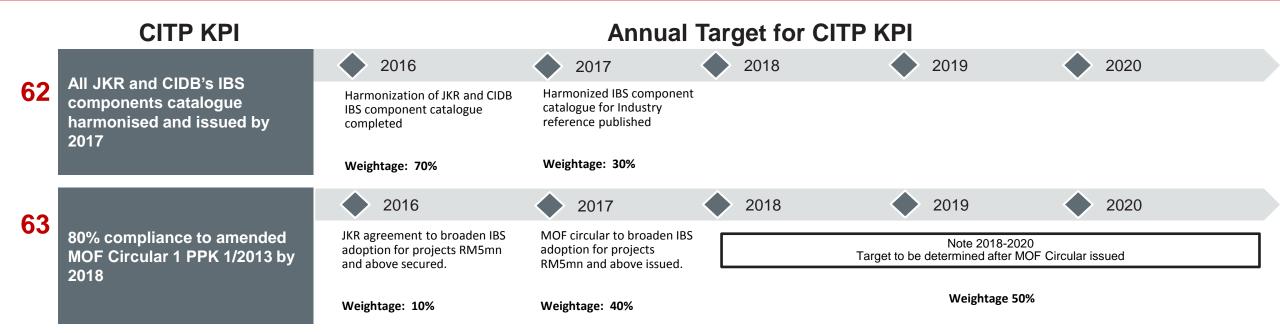
- 68 At least two economic mechanisms to propel adoption of IBS introduced by 2017
 - Manufacturing and installation equipment import tax reduction
 - •Tax Holiday for qualified local IBS manufacturers until 2020

MIDA, MITI, IRB, KPKT, Local Authority, MOF, CIDB

P3a Drive scale of IBS adoption via public sector projects



P3a Drive scale of IBS adoption via public sector projects



P35 Drive scale of IBS adoption via private sector projects

	CITP KPI	Annual Target for CITP KPI				
		2016	2017	2018	2 019	2020
64	100% new Development Order in Greater Klang Valley for projects RM50 Mn and above achieved minimum 50 IBS Score by 2018	Criteria to mandate IBS in Private Sector established and approved by MNKT IBS criteria for new private sector projects anounced by KPKT	PBTs in Greater Klang Valley agreement to adopt IBS criteria as a prerequisite for issuance of DO secured and implemented	KPKT Report on IBS adoption for private sector project published. Corrective action for non- complance of IBS adoption proposed and implemented	KPKT Report on IBS adoption for private sector project published. Corrective action for non- complance of IBS adoption proposed and implemented	
		Weightage: 30%	Weightage: 30%	Weightage: 20%	Weightage: 20%	
05		2016	2017	2018	2019	2020
65	by identified local authorities in three states (Selangor, Johor & Pulau Pinang) for projects RM50Mn and above achieved minimum 50 IBS	Criteria to mandate IBS in Private Sector established and approved by MNKT IBS criteria for new private sector projects anounced by KPKT	PBTs in three agreement to adopt IBS criteria as a prerequisite for issuance of DO secured and implemented	KPKT Report on IBS adoption for private sector project in three) published. Corrective action for non- complance of IBS adoption proposed and implemented	KPKT Report on IBS adoption for private sector project in three published. Corrective action for non- complance of IBS adoption proposed and implemented	KPKT Report on IBS adoption for private sector project in three published. Corrective action for non-complance of IBS adoption proposed
	Score by 2020	Weightage: 30%	Weightage: 30%	Weightage: 20%	Weightage: 20%	and implemented Weightage: 20%

P3C Propel IBS supply chain via economic mechanisms

	CITP KPI	Annual Target for CITP KPI					
		2016	2017	2018	2019	2020	
66	At least 100 more new IBS component manufacturing plants established at various strategic locations by 2020	20 new IBS manufacturer registered	20 new IBS manufacturer registered	20 new IBS manufacturer registered	20 new IBS manufacturer registered	20 new IBS manufacturer registered	
		Weightage: 20%	Weightage: 20%	Weightage: 20%	Weightage: 20%	Weightage: 20%	
67	At least 5,000 professionals (engineers, architects & quantity surveyors) trained to apply IBS and modular coordination from design phase by 2020	2016	2017	2018	2 019	2020	
		250 professionals trained in IBS and MC	1500 professionals trained in IBS and MC	1500 professionals trained in IBS and MC	1500 professionals trained in IBS and MC	250 professionals trained in IBS and MC	
		Directory of trained professionals published	Directory of trained professionals published	Directory of trained professionals published	Directory of trained professionals published	Directory of trained professionals published	
		Weightage: 5%	Weightage: 30%	Weightage: 30%	Weightage: 30%	Weightage: 5%	
68		2016	2017	2018	2019	2020	
	At least two economic mechanisms to propel adoption of IBS introduced by 2017	Tax Holiday incentive for new IBS manufacturing plants approved and implemented. Report on IBS Tax Holiday incentive recipients published.	Second Incentive on economi mechanism to propel IBS adoption proposed and submitted to MOF. Report on IBS incentive recipients published.	c Note 2018-2020 Target to be determined after proposal on second incentive approved			
		Weightage: 40%	Weightage: 30%		Weightage 30%		



ACTION PLAN TO TRANSFORM THE INDUSTRY TOWARDS IBS ADOPTION



- Mandate 100% new Development Order by identified local authorities in three states (Selangor, Johor & Pulau Pinang) for projects RM50Mn and above achieved minimum 50 IBS Score
- Mandate 100% new Development Order in Greater Klang Valley for projects RM50 Mn and above achieved minimum 50 IBS Score
- Enhance coverage of IBS adoption for public projects RM5 Mn and above.
- Involve AG in auditing non-compliance to MOF Circular SPP Bil.7- 2008 for IBS Public Project.
- Akta 520 CIDB: To regulate the implementation of IBS in Construction Industry.

- Reducing import duty on IBS Machineries & Equipment (MITI-MoF)
- Offering Tax Holiday on new IBS Factories (MIDA-IRB -MoF)
- Increased plot ratio to Developers for new IBS projects (KPKT-LAs)
- Levi Exemption for Private Residential Projects achieved 50 IBS Score (CIDB - Existing Incentive)
- IBS Promotion Fund (IPF) RM500Mn (SME Bank-MoF Existing Incentive)

CITP ACHIEVEMENTS JUNE 2016



TWGs established and had meetings

CITP-MC established and had meeting

members of IWG/TWG represented by Government (124)

members represented by Industry (128)

Initiative KPIs & ! Thrust KPIs confirmed by IWG/TWG

Pledges, 22 MoC & 2 MoU signed by Government and Industry

CITP PROGRESS STATUS AS OF JUNE 2016

7310 Initiative KPIs on track / ahead of schedule **19/110** Initiative KPIs behind schedule **18/110** Initiative KPIs commencing in 2017

THANKYOU