

2022 SEAISI STEEL MEGA EVENT & EXPO (TECHNOLOGY, SUSTAINABILITY, CONSTRUCTION)

CONSTRTUCTION 4.0 STRATEGIC PLAN (2021-2025): THE ADOPTION OF TECHNOLOGY IN THE CONSTRUCTION INDUSTRY IN MALAYSIA

*General Manager
Technology Development Sector, CIDB Malaysia*

**15 NOVEMBER 2022 | SUNWAY PYRAMID CONVENTION
CENTRE**



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About CIDB Malaysia

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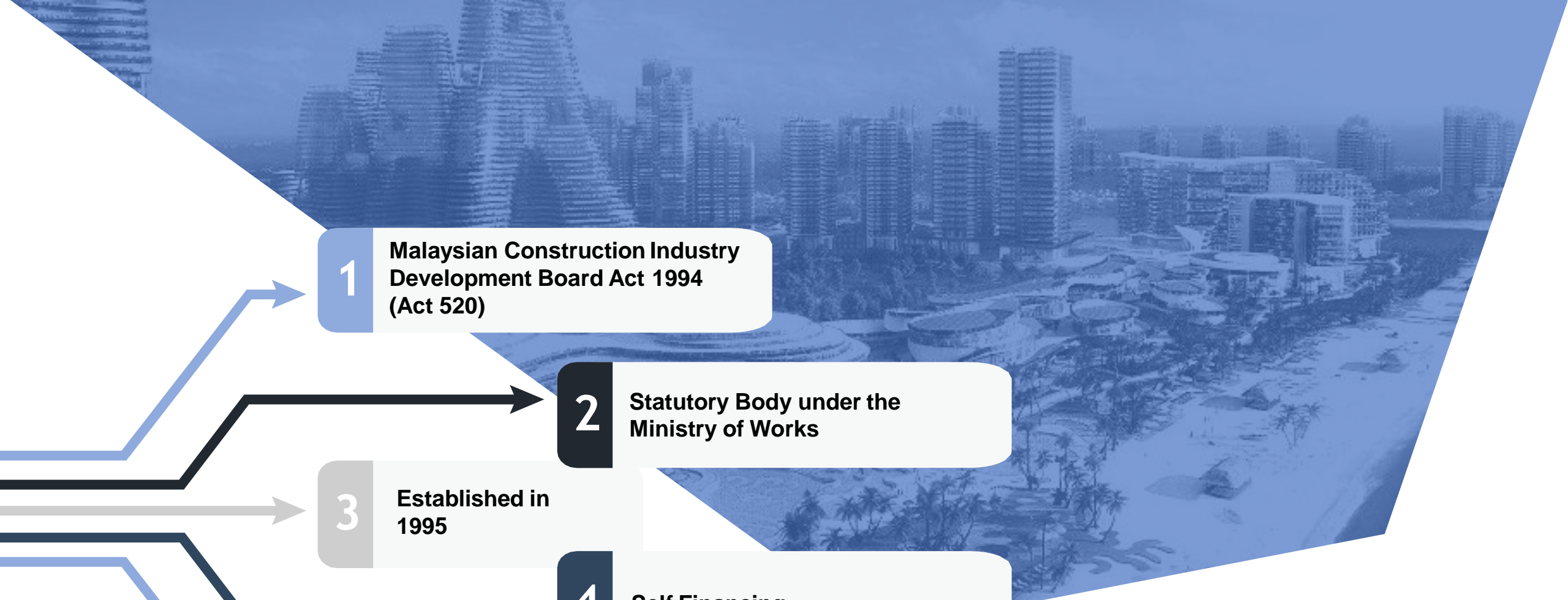
The Construction 4.0 &
The Strategic Plan (2021-2025)

The Way Forward in Embarking
Technology-based Initiatives

01

03

Technology Look Up In The
Construction Industry



1

**Malaysian Construction Industry
Development Board Act 1994
(Act 520)**

2

**Statutory Body under the
Ministry of Works**

3

**Established in
1995**

4

Self Financing

5

Driven by the Private Sector

CIDB MALAYSIA IN BRIEF

THE MISSION



To regulate, develop and facilitate the construction industry by inculcating professionalism in delivering quality, productive and sustainable built environment.



CIDB MALAYSIA STRATEGIC INSPIRATIONS

“ To be an esteemed organization that delivers construction excellence in Malaysia. ”

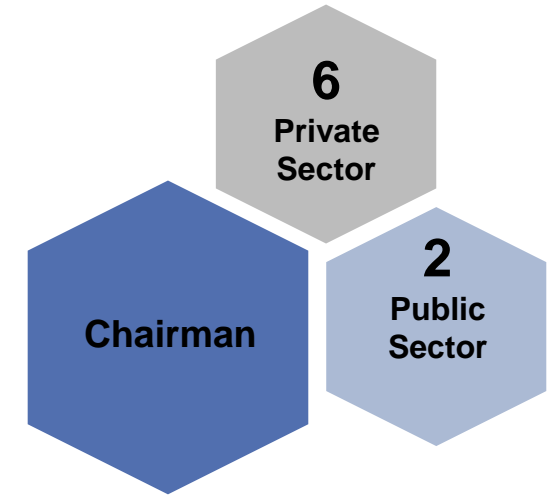
THE VISION



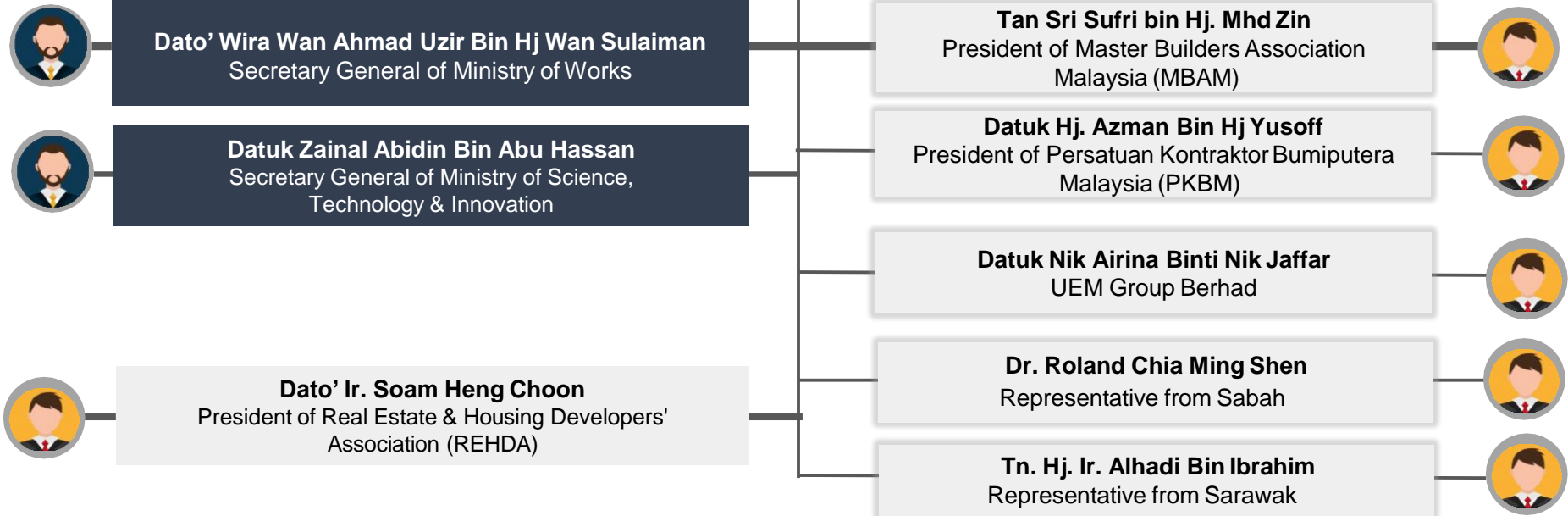
CIDB MALAYSIA

BOARD OF DIRECTORS

Appointment of
Board of Directors
based on Act 520:



CHAIRMAN
YB. Ir. Hj. Yusuf Bin Hj. Abd.
Wahab



THE ROLES OF CIDB: 14 FUNCTIONS UNDER ACT 520

1

ADVISORY

2

REGULATORIES

3

DEVELOPMENT

ROLE

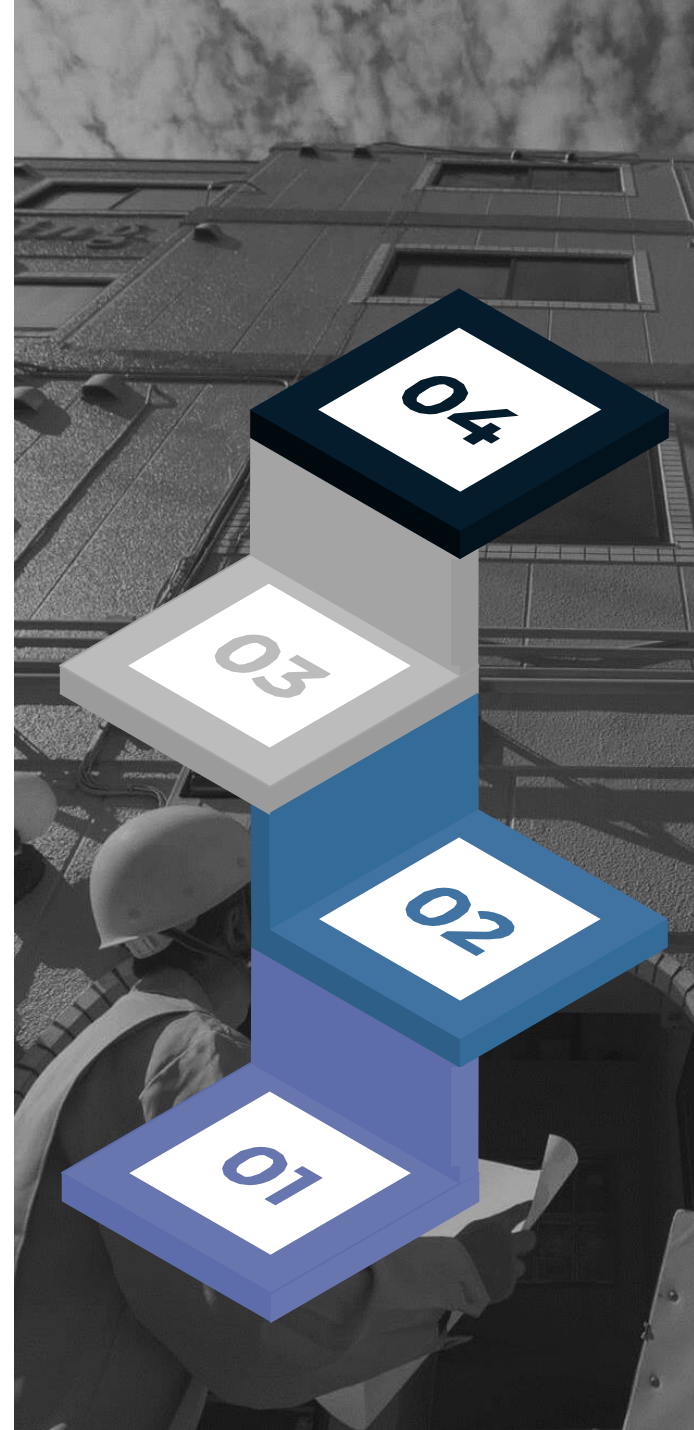
01

ADVISORY

WHAT COMPRISES IN ADVISORY?

Provide **consulting and advisory** services

Manage complaints or reports made in respect of any failure of construction work



Advise and **recommend** to the Federal and State Governments

To **promote and stimulate** the development, improvement and expansion of the construction industry

ROLE
02

REGULATORY

Regulate the implementation of the **Industrial Building System** in the construction industry

Registration & Accreditation Of **Personnel Contractors**

WHAT COMPRISES IN REGULATORIES?



Regulate the implementation of **quality and safe construction work**

Regulate compliance with **standards for construction work and building materials**

Registration & Accreditation Of **Contractors**

ROLE

03

DEVELOPMENT

**WHAT
COMPRISES IN
DEVELOPMENT?**

Advancing & Promoting
quality assurance

Establish, develop,
review and coordinate
**training of construction
personnel & contractors**
in the construction
industry



Advancing & assisting
in the **export of
services**

Promoting **Technology,
Developing &
Conducting Research**

Provide & maintain
**Industrial Information
System Construction**



DIRECTIVE GOVERNANCE

In line with national policies such as the Five Year Malaysia Plan, Dasar Pembinaan Negara (DPN) 2030 and Wawasan Kemakmuran Bersama (WKB) 2030 to make the construction industry more productive and competitive



CIDB Strategic Plan (2021-2025)



Construction 4.0 Strategic Plan (2021-2025)



CIDB ICT Strategic Plan (2020-2025)



Organisational Anti-Corruption Plan (2021-2025)



The document was launched during the International Construction Week Conference on :

17 November 2020

By Senior Works Minister,
YB Dato' Sri Haji Fadillah Haji Yusof

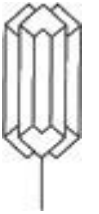
LAUNCH OF CONSTRUCTION 4.0 STRATEGIC PLAN (2021-2025)



To be the leading country in the implementation of Construction 4.0 in the Southeast Asian region

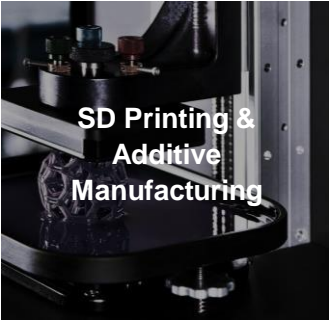


Transform the Malaysian construction industry by empowering smart construction for future society

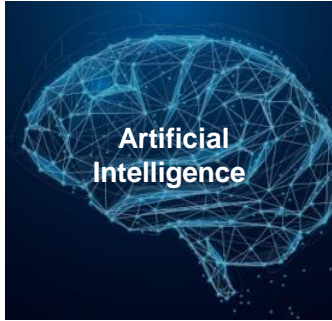


CONSTRUCTION 4.0

VISION & MISSION



**SD Printing &
Additive
Manufacturing**



**Artificial
Intelligence**



**Advanced
Building Materials**



**Prefabrication &
Modular
Construction**



Blockchain



**Building
Information
Modelling (BIM)**



THE 12

EMERGING TECHNOLOGY



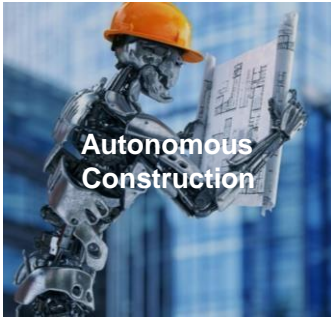
**Augmented Reality
& Virtualisation**



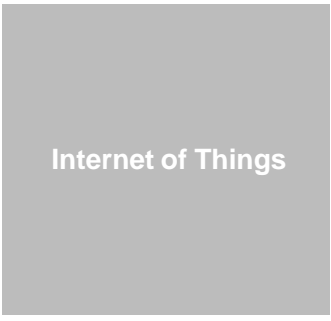
**3D Scanning &
Photogrammetry**



**Big Data &
Predictive
Analytic**



**Autonomous
Construction**



Internet of Things



**Cloud and Realtime
Collaboration**

CONSTRUCTION 4.0 EMERGING TECHNOLOGIES

IMPLEMENTATION PHASE

MEDIUM TERM IMPLEMENTATION (<3 YEAR)

- Big Data & Predictive Analytics
- Internet of Things

SHORT TERM IMPLEMENTATION (<1 YEAR)

- Prefabrication & Modular Construction
- Autonomous Construction
- Cloud & Realtime Collaboration
- Building Information Modelling
- Augmented Reality & Virtualisation
- 3D Scanning & Photogrammetry

LONG TERM IMPLEMENTATION (>5) YEAR)

- Advanced Construction Materials
- Blockchain
- Artificial Intelligence
- 3D Printing & Additive Manufacturing



STRATEGIC THRUST 1

BUILDING CAPACITY



STRATEGIC THRUST 2

RESEARCH, INNOVATION, COMMERCIALISATION & ENTREPRENEURSHIP (RICE)



STRATEGIC THRUST 3

SMART INTEGRATED TECHNOLOGY, INNOVATION & INFRASTRUCTURE



STRATEGIC THRUST 4

ENHANCED BUSINESS ENVIRONMENT

STRATEGIC OBJECTIVES

Preparing future workforce for Construction 4.0

Create mechanisms to support innovators and technology adopters

Strengthen Quadruple Helix partnership

Driving research and innovation in Construction 4.0

Improve government policy intervention in applying specific technology

Enhance collaboration of disruptive technology and data centre repository

Enhance stakeholders' local and international partnerships to increase the business growth of the construction industry

Creating collaborative governance ecosystems through government intervention

Promote the role of foreign direct investment or collaboration

ENABLERS



Economy



Integrated Technology



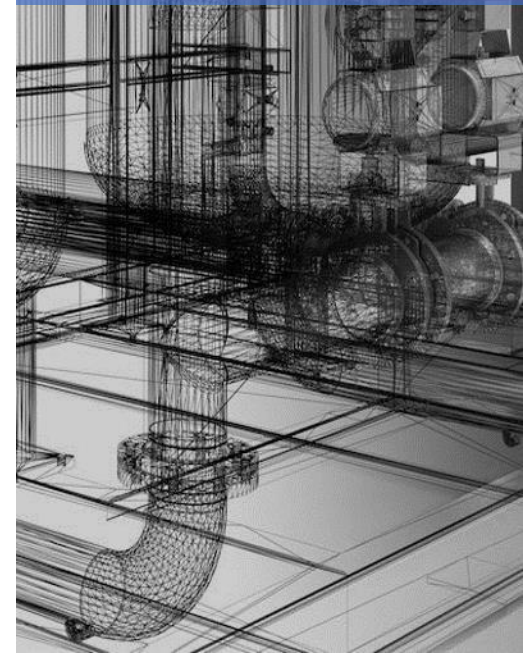
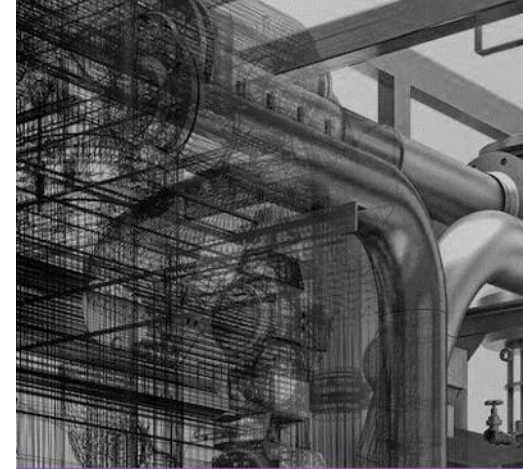
People

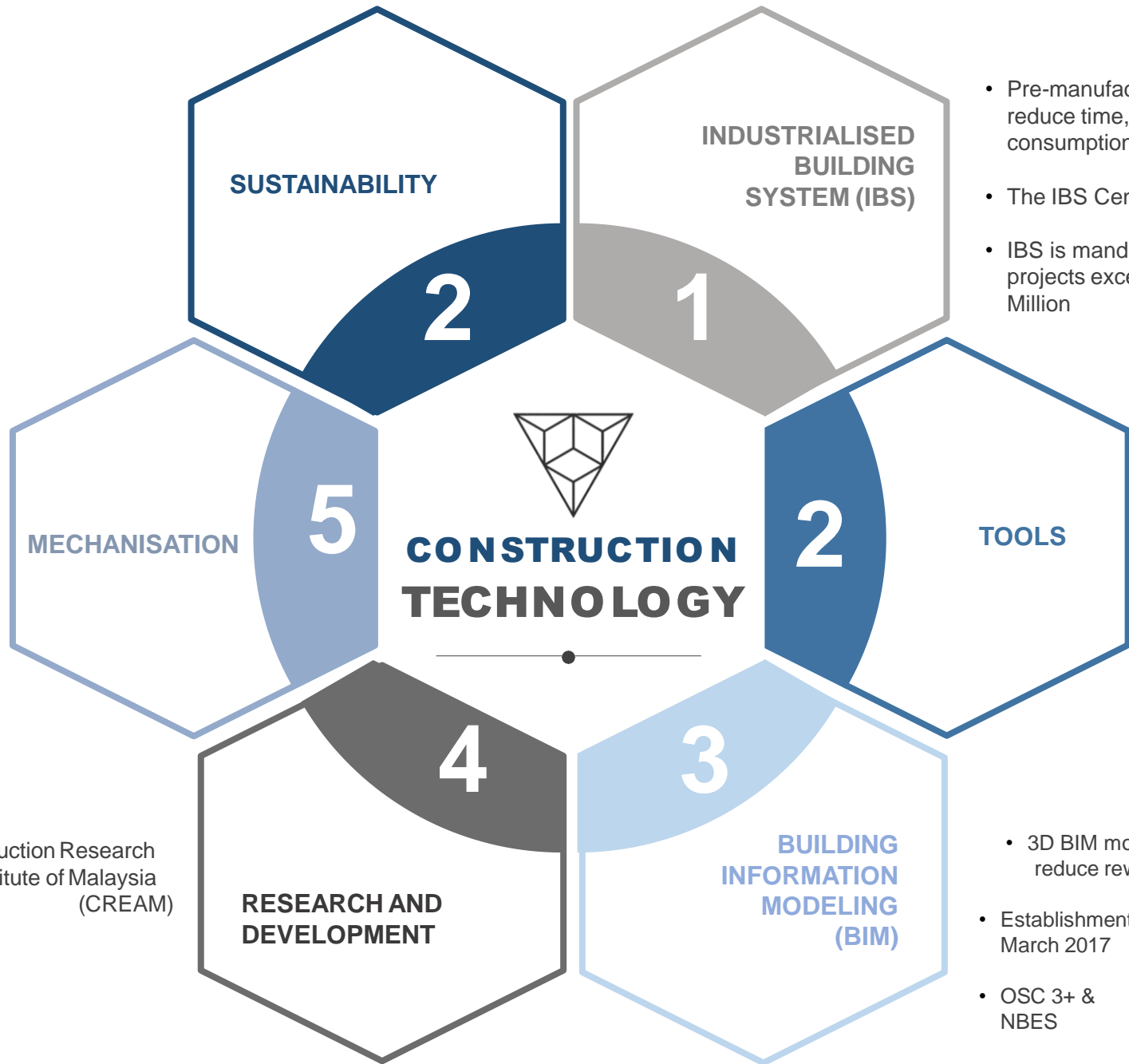


Governance

STRATEGIC THRUST

FOR CONSTRUCTION 4.0





- Pre-manufacturing components reduce time, labor and waste consumption
- The IBS Center was established
- IBS is mandatory for private projects exceeding RM50 Million

- Malaysian Carbon Reduction and Environmental Sustainability Tool (MyCREST)
- Quality Assessment System in Construction (QLASSIC)
- Safety and Health Assessment System in Construction (SHASSIC)
- Sustainability Infrastructure Rating Tool (INFRASTAR)

- 3D BIM models are proven to reduce rework in construction
- Establishment of MyBIM Center in March 2017
- OSC 3+ & NBES

Construction Research Institute of Malaysia (CREAM)



THE WAY FORWARD



FUTURE WORKS



EMBRACING
QUALITY

LEVERAGING
PRODUCTIVITY

PROMOTING
INNOVATIONS

STRENGTHENING
DIGITALISATION

OUR
WAY TO GO !

