



HRDF HUMAN CAPITAL REPORT

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CONSTRUCTION RELATED TRAINING PROGRAMME UNDER HRDF

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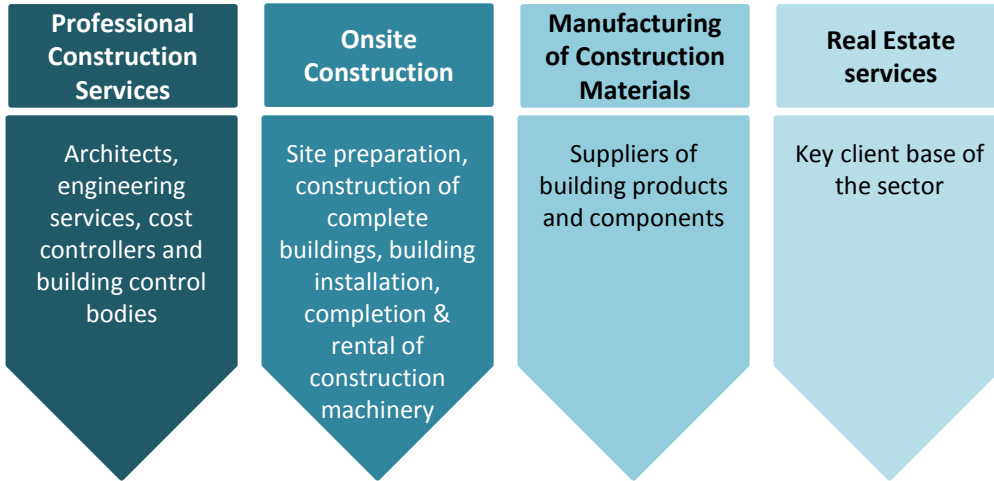
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CONSTRUCTION INDUSTRY IN MALAYSIA

QUICK TAKEAWAYS AND HIGHLIGHTS

CONSTRUCTION INDUSTRY IN MALAYSIA

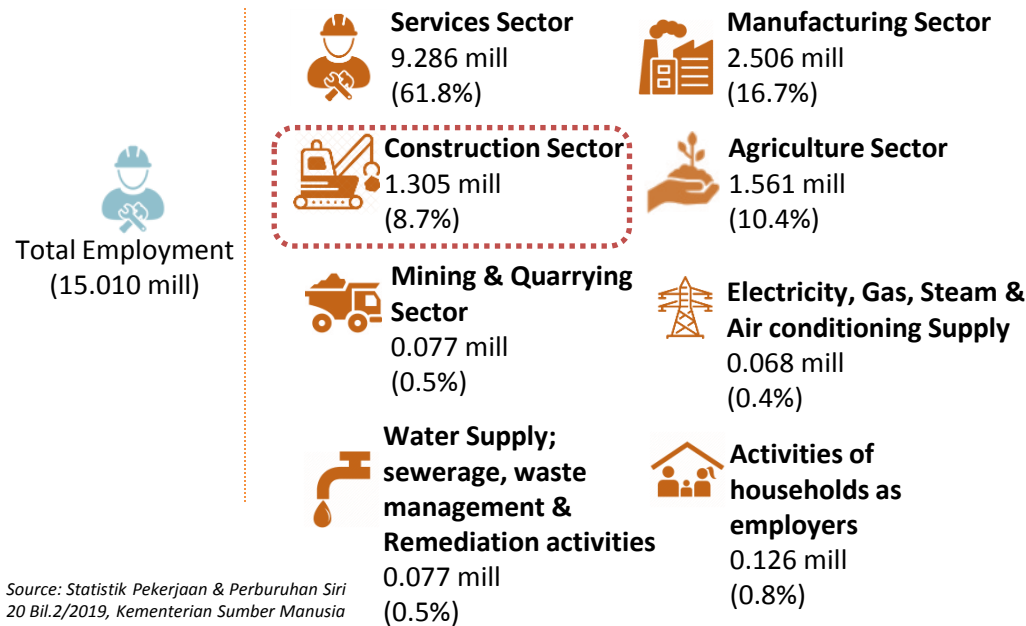
The construction industry plays an important role in any country's economic development. It provides a great support to aggregate economy by backward and forward linkages with other sectors of economy. In Malaysia, the construction sector can be classified into the following subsectors:



Source: Malaysia Productivity Corporation (MPC)

EMPLOYMENT LANDSCAPE OF CONSTRUCTION INDUSTRY

8.7% of Total Employment in Malaysia are from Construction Sector



Source: Statistik Pekerjaan & Perburuhan Siri 20 Bil.2/2019, Kementerian Sumber Manusia

85% of Filled Positions in Construction Sector are Dominated by Semi-Skilled Workers

	Skilled	Semi-Skilled	Low-Skilled
2018	0.149	1.107	0.046
2017	0.150	1.092	0.044
2016	0.145	1.085	0.045

Source: Employment Statistics First Quarter 2019 by Department of Statistics Malaysia

The MSIC2008 codes for constructions and the related activities:



*41 Construction of Buildings



*42 Civil Engineering



*43 Specialised Construction Activities

*2 Digit

Source: MSIC Code 2008

Ministry, Agencies and Associations related to Construction Sector:

- Ministry of Works (MoW)
- Construction Industry Development Board (CIDB)
- Master Builders Association Malaysia (MBAM)
- Association of Environmental Consultants & Contractors in Malaysia (AECCOM)
- United Malaysia Contractors Association
- Construction Research Institute of Malaysia (CREAM)
- Welding Institute of Malaysia (WIM)
- Malaysian Occupational Scaffolding Association

Source: Info from organisation's website as of 8th August 2019

FUTURE DIRECTION OF CONSTRUCTION INDUSTRY

Construction Industry Development Board (CIDB) as the Training Coordinator for Construction Industry

CIDB was established under the Construction Industry Development Board Act 1994 (Act 520) with an objective of developing the capacity and capability of the construction industry through the enhancement of quality and productivity by emphasising on professionalism, innovation and knowledge to improve the quality of life.

Construction Industry Transformation Programme (CITP)

The Ministry of Works (MoW) and CIDB has spearheaded the development of the Construction Industry Transformation Programme (CITP) 2016-2020 to empower and strengthen the construction industry as outlined in the thrusts of 11th MP. CITP aims to transform the Construction Industry through four (4) strategic thrusts, namely, i) **Quality, Safety and Professionalism**, ii) **Environmental Sustainability**, iii) **Productivity**, and iv) **Internationalisation**.

Competency falls under the 3rd initiative, **Productivity Thrust**. Specifically, under **Initiative P1: Continue Investment in Human Capital Development in Construction**.

Source: Construction Industry Review and Prospect 2017/2018 Report by CIDB

Construction Industry and Industrial Revolution 4.0 (IR4.0)

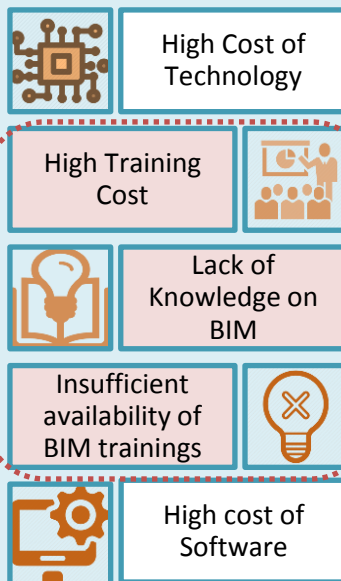
Challenges to 'People' have influenced the rate of technology implementation for construction companies.

Roadmap for IR4.0 in Construction Sector

-  **Building Information Modeling (BIM)**
-  **Virtual Migration of Physical structures**
- 3-D Laser Scanning & Aerial Mapping
-  **Data-Driven Design**
- Big Data Analytics
-  **Simulation and Rapid Prototyping**
- Simulation enhancing through holographic & 3D printing

Source: Keynote Address: "Construction Beyond 2020" in International Construction Transformation Conference 2019 by Chief Executive of CIDB

Challenges to the Implementation of BIM



Source: Malaysia Building Information Modeling Report 2016 by CIDB

There are **509 National Occupational Skills Standards (NOSS)** (from level 1 to 3) related to Construction industry.

Source: Construction Industry Review and Prospect 2017/2018 Report by CIDB

Construction Industry Occupational Title (CIOT) of construction-related NOSS:

- a) Scaffolders
- b) Welder 3G and 6G
- c) Wireman PW1, PW2, PW3, PW4
- d) Chargeman A0, A1, A4, B0, B1 and B4
- e) Gas Pipe Filter
- f) Blasters and Painters
- g) Non-Destructive Testing (NDT) Operators
- h) Crane Operators
- i) Plant Operators
- j) Plumbers
- k) Air-Conditioning Installers

Source: Construction Industry Review and Prospect 2017/2018 Report by CIDB

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TRAINING RELATED TO CONSTRUCTION INDUSTRY

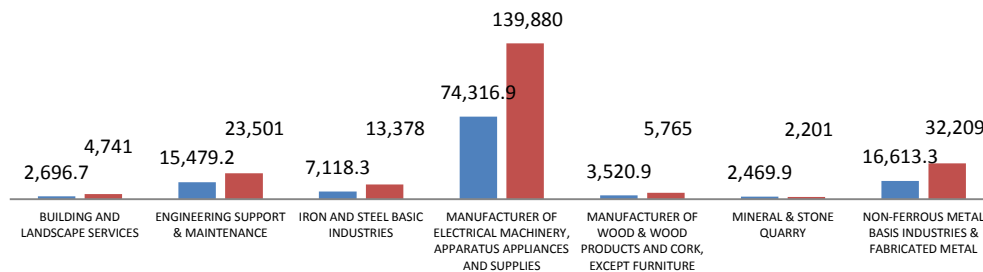
Common types of training related to construction industry comprised of three (3) categories:

Contractors, Construction & Safety	1. CIDB IBS Construction Professional Training 2. Construction Personnel Competency Based Training Programme (CCP) 3. Contractor Training Programme (CPD) 4. Construction and Building Envelope Inspection 5. Advanced Construction Management, Site Operation and Supervising Multiple Projects 6. Planning Construction Equipment and Methods For Reducing Cost Of High-rise Buildings 7. ACI Code Requirements and Specifications For Concrete Design, Construction and Repair	Materials / Design	1. GreenRE Manager's Course (GREMC) 2. GBI Facilitator Course / GBI Certifier Course 3. Solar Energy Courses, Training The Technicians 4. DIALux EVO Lighting Simulation Training 5. Structural Steel Design with Autodesk Robot Structural Analysis (Eurocode 3)
	1. Code of Ethics & Regulations 2. Engineering Management Practice 3. Safety & Health At Work 4. AutoCad Civil 3D Land Development 5. Building Operational Excellence In The Process Industry 6. Geometric Design Of Urban and Rural Roads		

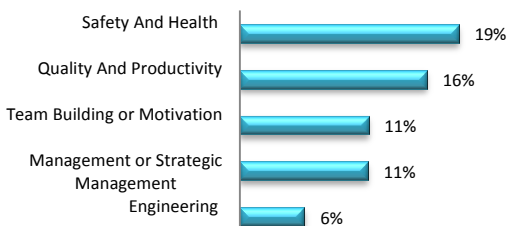
Source: Construction Industry Development Board (CIDB), Creative Malaysia Training Centre, Welding Institute of Malaysia (WIM), Master Builders Association Malaysia (MBAM), BMC Training, IEM Academy, Green Building Index (GBI), Malaysian Photovoltaic Industry Association (MPIA)

Construction Related Training Programme under HRDF in year 2018

■ Financial Assistance (RM '000) ■ Training Places



Top 5 Skill Areas focused by Construction related sub-sectors



Source: HRDF Internal Database, 2018

Example of training programme attended by Construction related sub-sectors

1. Seminar Pematuhan Akta 520 (Bahan Binaan)
2. Bahan Binaan, Pengurusan Bahan Berbahaya dan Binaan Hiasan
3. Seminar Keselamatan Kebakaran Bahan Binaan, Pengurusan Bahan Binaan
4. QA dan QC dalam binaan
5. Pengurusan Tapak Binaan
6. Seminar Kesedaran QLASSIC & SHASSIC
7. Pembinaan & Mulatugas Pencawang Elektrik

CIDB liaise with the respective **TVET authorities** to identify and recommend the optimal solutions for high-impact trades / specializations:

1. Akademi Binaan Malaysia (ABM)
2. Kolej Komuniti
3. Pusat Giatmara
4. Institut Latihan Perindustrian (ILP)
5. Institut Kemahiran MARA (IKM)
6. Institut Kemahiran Belia Negara (IKBN)
7. Pusat Latihan Teknologi Tinggi (ADTEC)
8. Persekutuan Pusat Bertauliah JPK Malaysia (FeMac)

Source: Construction Industry Review and Prospect 2017/2018 Report by CIDB

WHAT'S NEXT FOR HRDF?

- It is an opportunity for HRDF to explore the required skills set needed to accommodate the emerging Industrial Revolution 4.0 as well as fulfilling the current business needs of this industry. As such, Research and Development (R&D) Dept. is recommended to initiate collaboration with CIDB to identify potential training programme required.
- The Customer Engagement Dept. is encouraged to utilise this data during the Expansion of the Act engagement session to reassure the effective utilisation of levy by stakeholders.
- As CIDB also charges levy to the approved work project (RM500k and above at 0.125%), it is recommended for the Senior Leadership Team (SLT) to engage with both MoHR and MoW to work hand in hand to harmonise PSMB and CIDB Act.



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