

# Taklimat Penawaran and Permintaan Guna Tenaga Negara

29th July 2016

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**KEY ROLES**

**KEY ROLES INCLUDES:**

- Providing a **centralised & interactive database**
- Ensuring of **availability of timely data** and promotion of **data sharing**
- **Undertaking** research on labour market areas
- **Industry Skills Committee: Identify Critical Skills Occupation** - joint committee with TalentCorp.

**CENTRE OF EXCELLENCE FOR NATIONAL LABOUR MARKET INFORMATION**

1

**LABOUR MARKET RESEARCH**

2

**LABOUR MARKET DATA WAREHOUSE**

**STRATEGIC PARTNERS**



**STAKEHOLDERS**

- **Government** for labour policy intervention manpower planning
- **Rakyat** for educational enhancement and career development
- **Employers/ business** for human capital management & development
- **Foreign/ local investors** for justification of business investment in the country

**WIDE RANGE**



**OUTPUT**

**OUTCOME**

**PORTAL & DASHBOARD: TIMELY LABOUR MARKET DATA & INFORMATION**



**ENGAGEMENT & DISSEMINATION:**

1. National Human Capital Development policy making
2. Human Capital Development planning through programmes/ studies/ questionnaires
3. Information sharing with Government agencies, researchers, educationers and students, employers, employees and rakyat
4. Engagement with international bodies i.e. OECD, ILO, WB and ASEAN Secretariat

**RESEARCH & PUBLICATION: AVG OF 5 RESEARCH & 8 PUBLICATIONS PER YEAR – MALAYSIA PLAN INPUT**



# **A Study on Human Capital Requirement for the Sarawak Corridor of Renewable Energy (SCORE) and Potential Development for Kota Samarahan with Special Focus on Serian Division**





This study covers 5 chosen industries at an in-depth level and 5 at broad-view level

## In-Depth Coverage



Oil-based Industry



Aluminum Industry



Steel Industry



Tourism Industry



Marine Engineering

## Broad-View Coverage



Logistics Industry



Construction Industry



Fishing and Aquaculture Industry



Palm Oil Industry



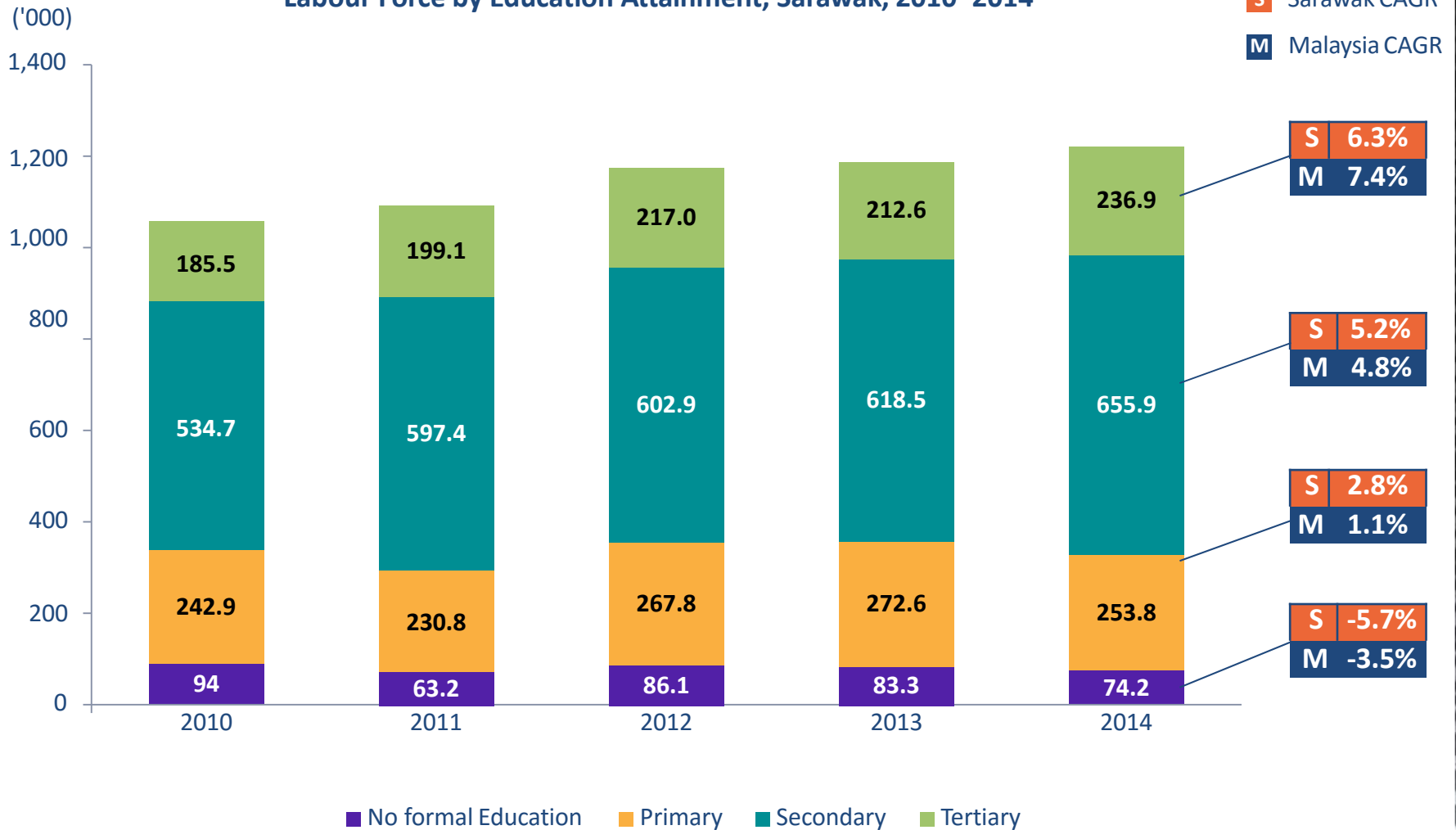
Timber-based Industry

# Labour Force by Education Attainment

The labour force with tertiary education has been growing at a CAGR of 6.3% from 2010–2014 which is at a lower rate compared to the national average



Labour Force by Education Attainment, Sarawak, 2010–2014

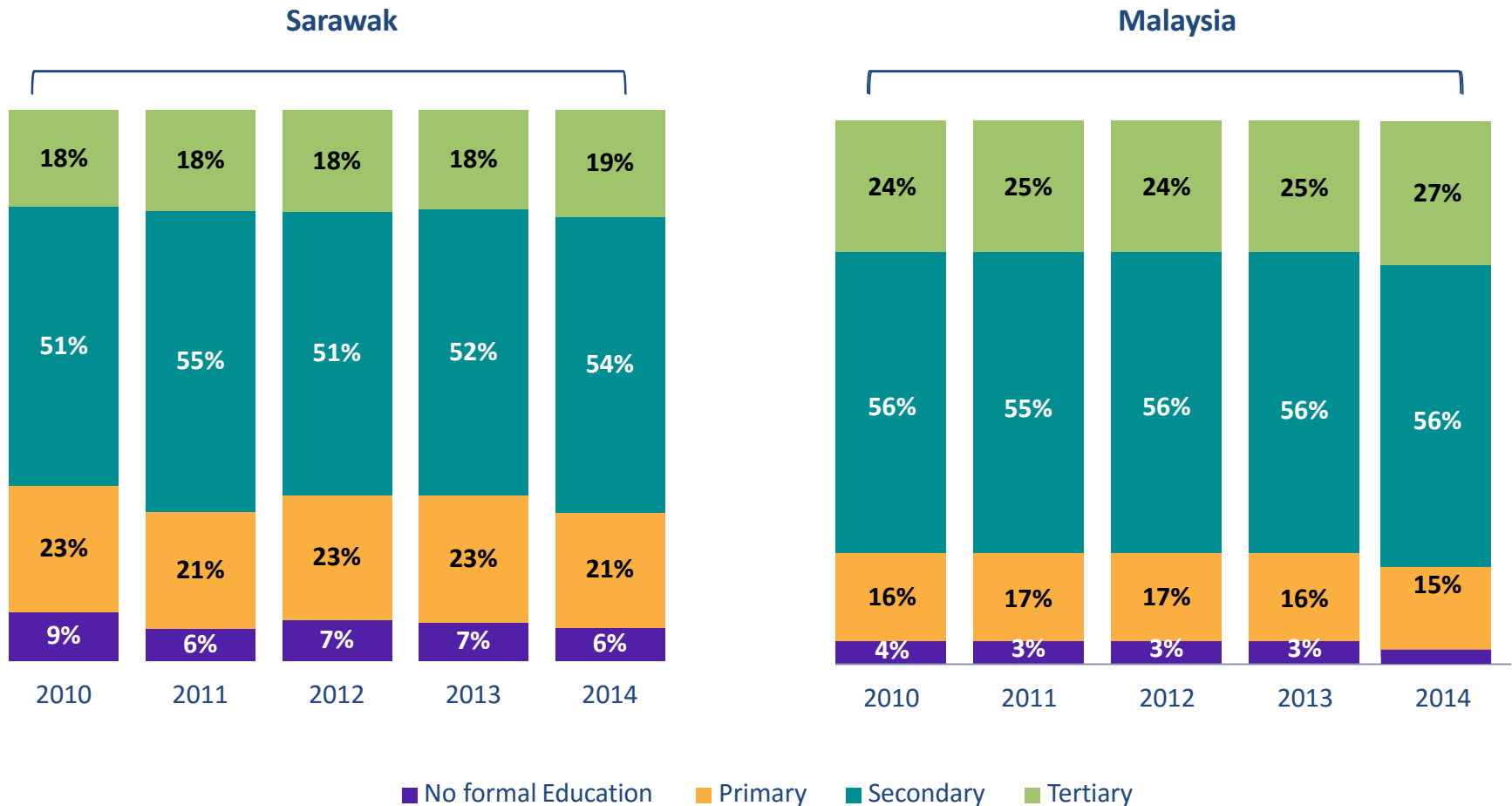


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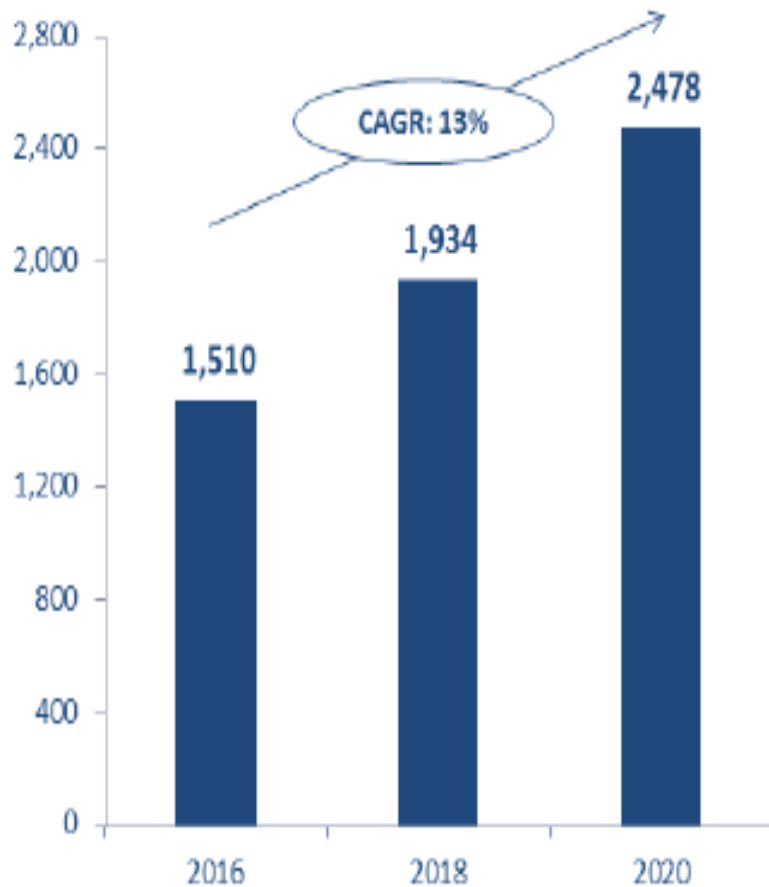


Composition of Labour Force by Education Attainment, Sarawak and Malaysia, 2010–2014

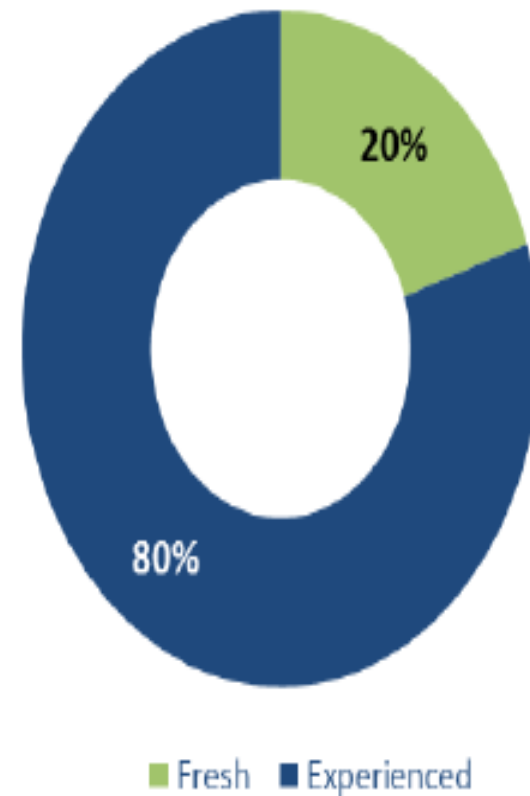


# Supply-Demand Gap Analysis (Oil & Gas) Skilled & Semi Skilled Workers

### Total Skilled and Semi-Skilled Demand



### Skilled and Semi-Skilled Demand by Experience Levels

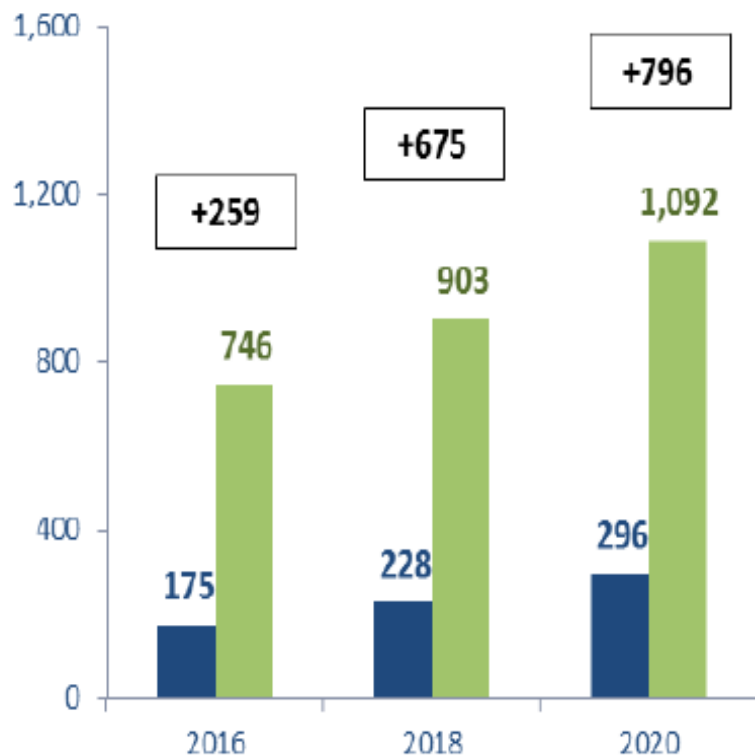




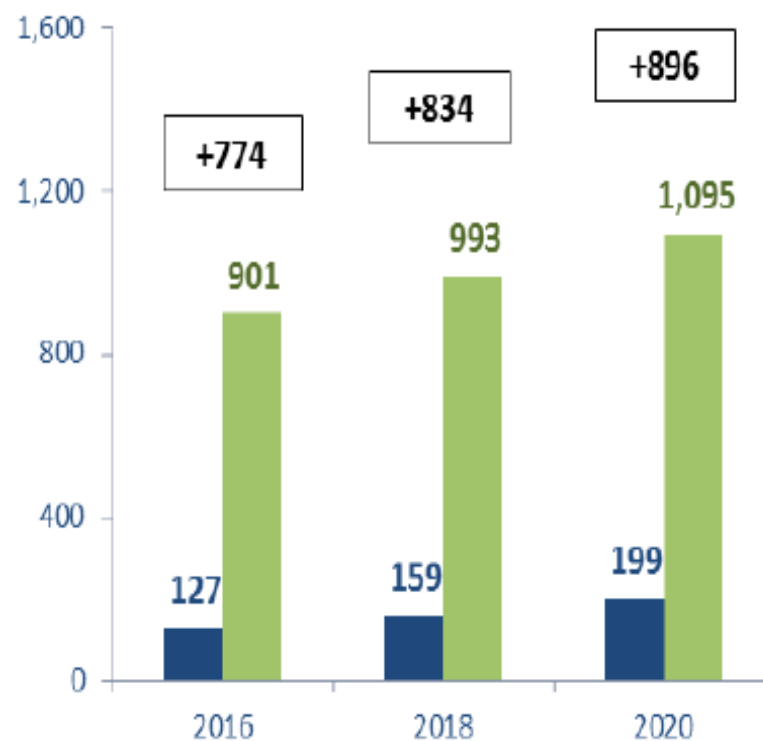
# Supply-Demand Gap Analysis (Oil & Gas) Skilled & Semi Skilled Workers



### Skilled Supply and Demand



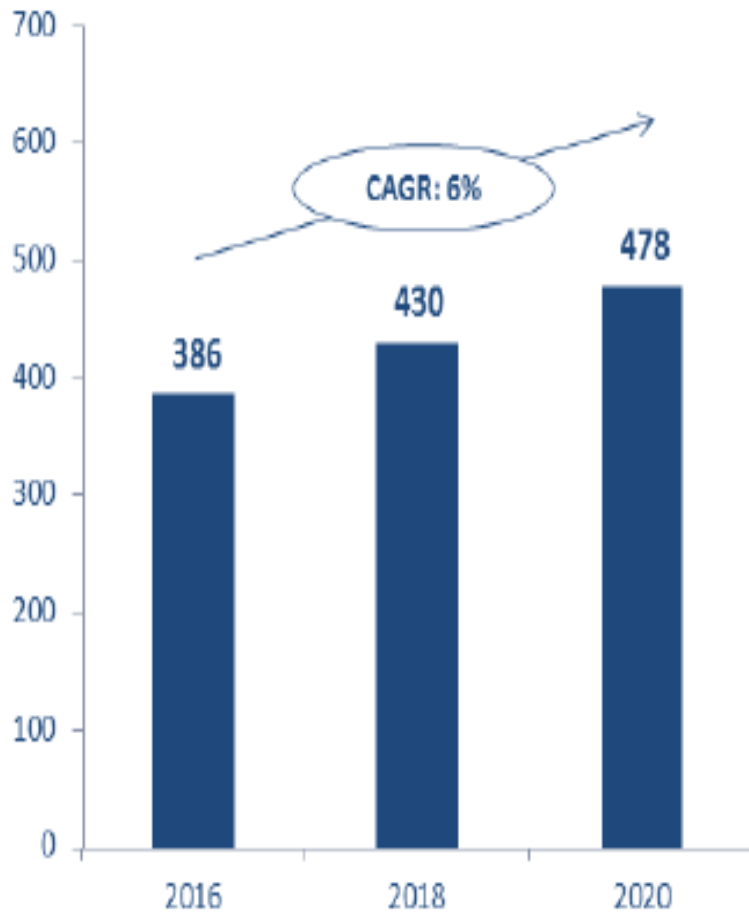
### Semi-Skilled Supply and Demand



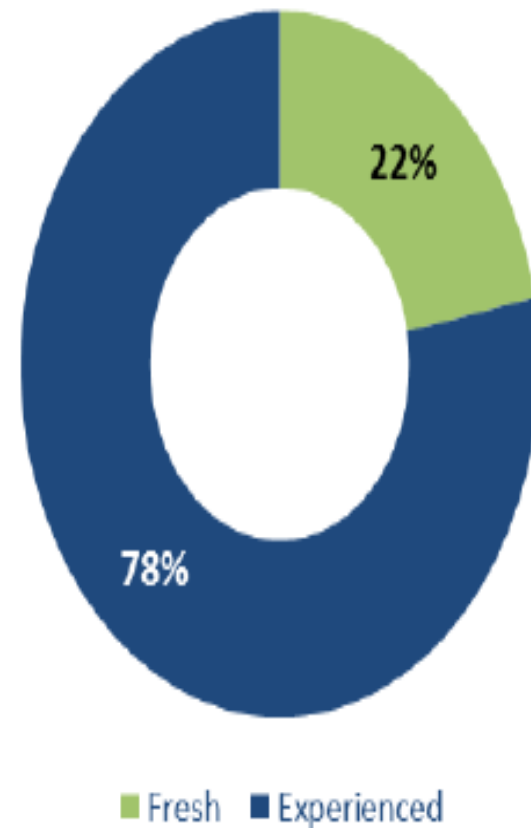
■ Demand ■ Supply

# Supply-Demand Gap Analysis (Shipbuilding) Skilled & Semi Skilled Workers

### Total Skilled and Semi-Skilled Demand

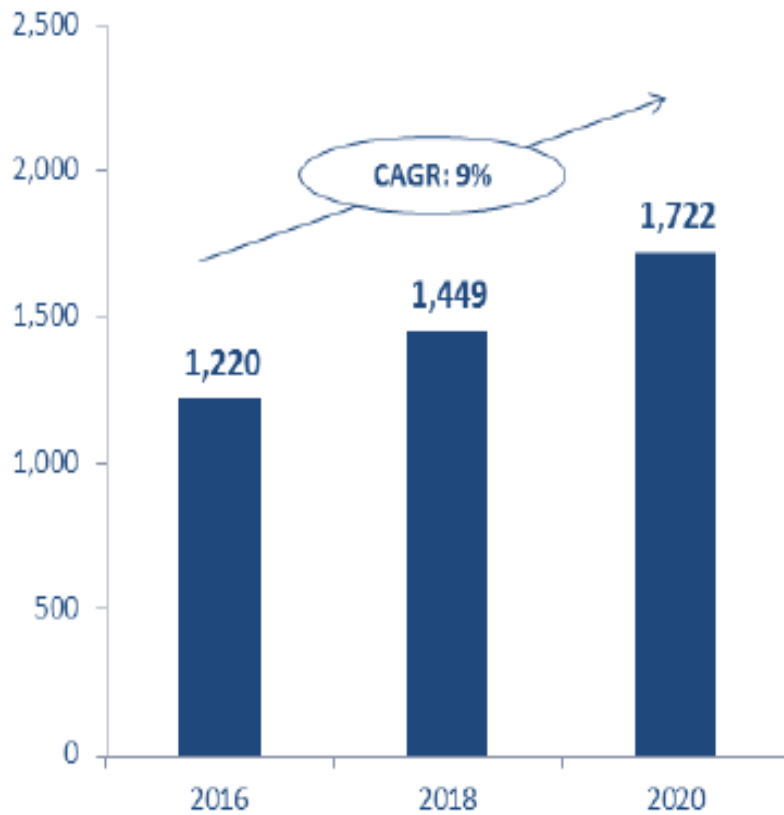


### Skilled and Semi-Skilled Demand by Experience Levels

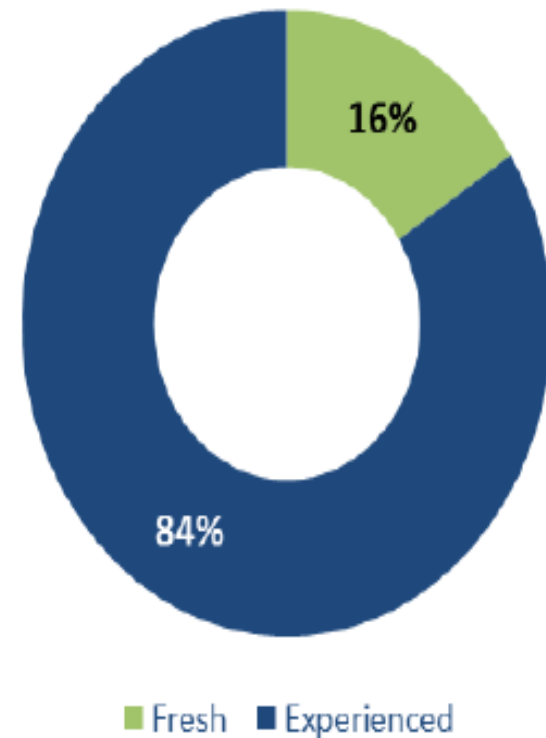


# Supply-Demand Gap Analysis (Aluminium & Steel) Skilled & Semi Skilled Workers

### Total Skilled and Semi-Skilled Demand



### Skilled and Semi-Skilled Demand by Experience Levels

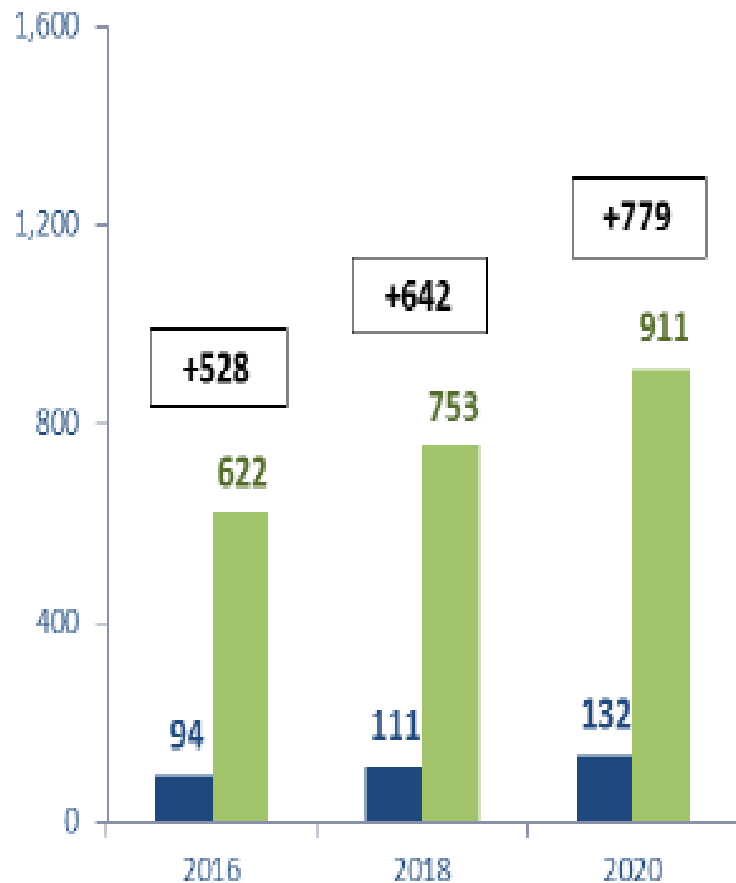


# Supply-Demand Gap Analysis (Aluminium & Steel)

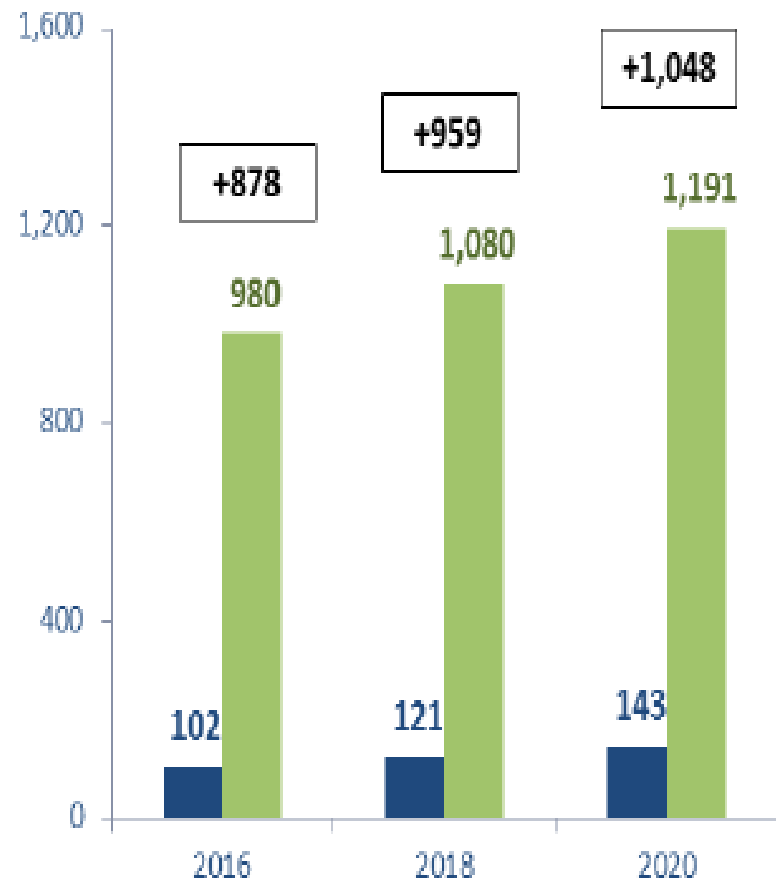
## Skilled & Semi Skilled Workers



### Skilled Supply and Demand

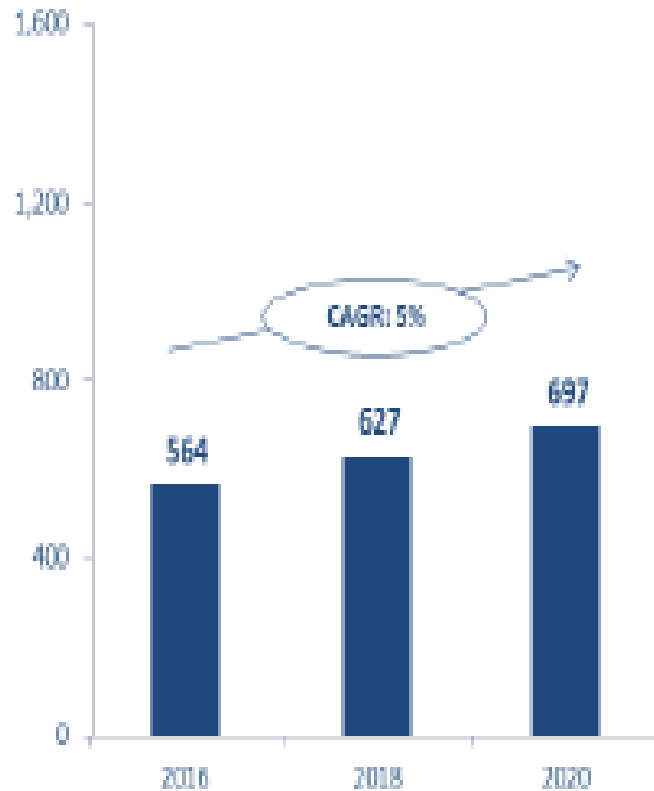


### Semi-Skilled Supply and Demand

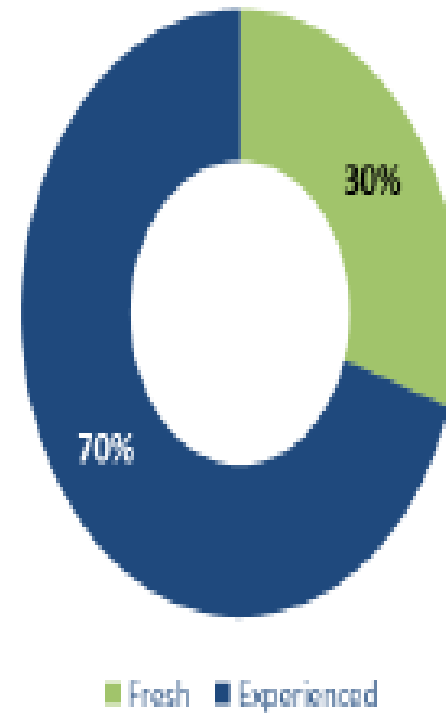


# Supply-Demand Gap Analysis (Tourism) Skilled & Semi Skilled Workers

Total Skilled and Semi-Skilled Demand



Skilled and Semi-Skilled Demand by  
Experience Levels

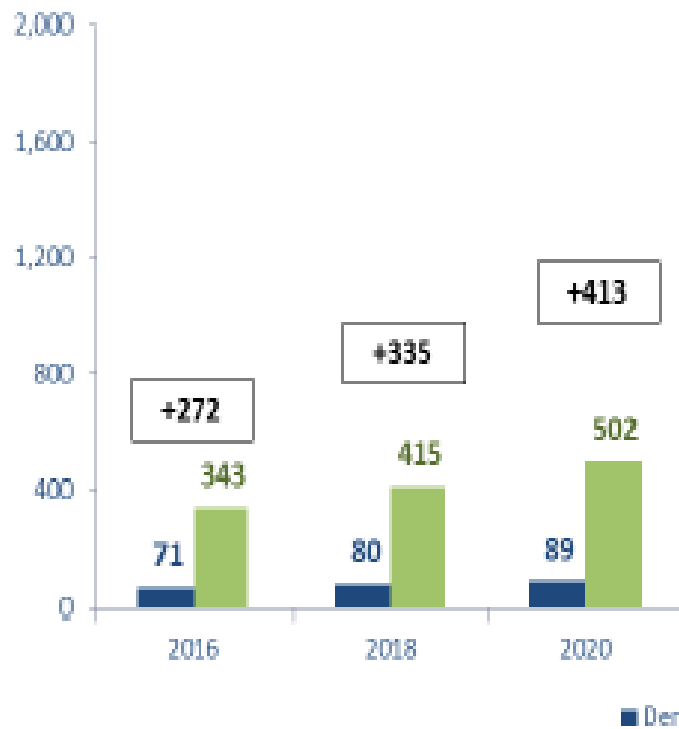




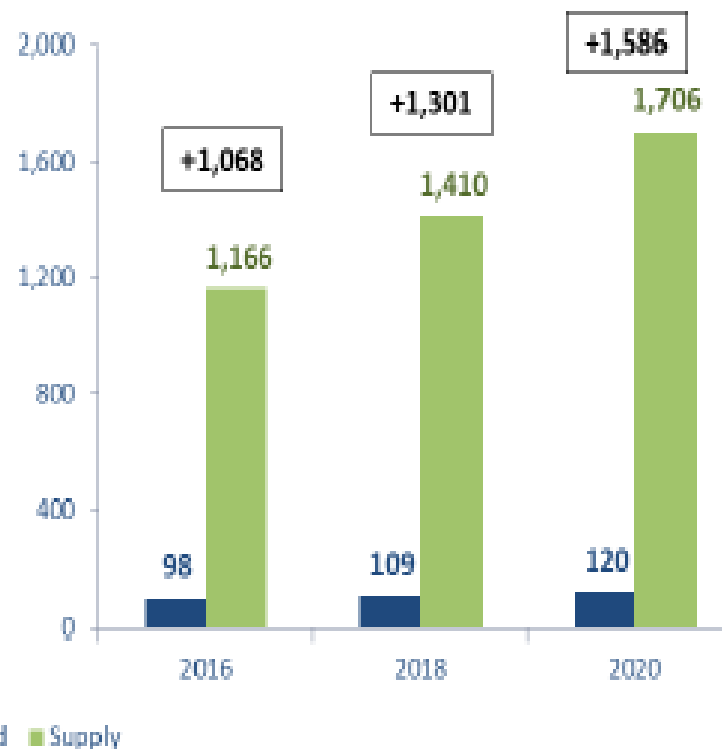
# Supply-Demand Gap Analysis (Tourism)

## Skilled & Semi Skilled Workers

### Skilled Supply and Demand



### Semi-Skilled Supply and Demand



## The jobs most in-demand are in the semi-skilled trade workers categories

kill Level	Jobs	Level of Demand
Skilled	Health & Safety Officer	High
Skilled	Mechanical Engineer	High
Skilled	Electrical Engineer	High
Skilled	Tour Operator	Medium
Skilled	Account Executive	Medium
Semi-Skilled	Electrician	High
Semi-Skilled	Tour Guide	High
Semi-Skilled	Technician: QC, Process, Instruments	High
Semi-Skilled	Mechanics: Machine	High
Semi-Skilled	Mechanics: Heavy Vehicles	High
Semi-Skilled	Crane Operator: Logistics & Construction	High
Semi-Skilled	Machinists: Lathe and CNC	High
Semi-Skilled	Motor Grader Operator	Medium
Semi-Skilled	Welders/Fitters	Medium

# Feedback from Industries

Some of the challenges faced by the employers

***“Supply of engineering graduates with relevant professional registration is limited”***

***“There is no clustering of talent pool due to the wide geographical range of the state”***

***“Fast introduction of new technologies, not many workers are skilled at that field”***

***“Applicants prefer to work in major towns than in remote areas. Quality of life is an important factor to attract & retain talents”***

***“The industry is still young, the talent pool available do not have enough experience”***

***“More recognition of prior learning is needed especially for trade workers”***

# Feedback from IHLs

Some of the challenges faced by the IHLs



*“It is a challenge for us to keep up with the latest technologies and equipment emerging in the industry. We need better support, facility and equipment sharing from the industries”*

*“Two way communications between us and the industries need to be stronger so that we match their needs”*

*“Institutions need to train the teachers as sometimes they lack experience and expertise in teaching curriculum that matters to the industry”*

*“More placements offers from the industries are needed so that the students will have the opportunities to experience the market first hand”*

# *Talent gap study in the Communications sector*

*Malaysian  
Communications  
and Multimedia  
Commission  
(MCMC)*

*Institute of  
Labour Market  
Information and  
Analysis (ILMIA)*

*June 2015*





# Key findings

1. Talent growth
2. Future talent needs
3. Challenges for sector for recruiting, attracting and retaining talent

## 1. Talent growth

- ◆ Growth Drivers: Demand for High Speed Broad Band (HSBB) and Fibre To The Home (FTTH) deployment. Emerging technologies like Internet of Things (IoT), Internet of Everything (IoE), cloud and data analytics, heterogeneous network (Het Net) convergence and content development
- ◆ Growth (4%) uneven: e.g. faster in HSBB & FTTH from smaller base but slower in mobile penetration already at 140%
- ◆ Wireless (4G,5G, LTE): reskilling rather than new jobs created, other areas will see new jobs but not substantial.

LTE= long term evolution

## 2. Future talent needs

- ◆ Need for optical fibre certified technicians and those with technical skills for LTE capability, infrastructure and network optimisation.
- ◆ Skills in network strategy and planning.
- ◆ Big data analytics will increase demand for technical competencies in data warehousing solutions, data mining etc. MDEC: currently 80 data scientist whereas 1,500 needed by 2020.

### 3. Challenges: recruiting, attracting and retaining talent

- ◆ Responses per vacancy more exceed number of positions. Ample number of applicants to choose from.
- ◆ Technical skills lacking but can be enhanced through on the job training and therefore focus on candidates with the right attitude and good communications skills.
- ◆ Access to training programmes, upskilling and those that promote continuous learning among top reasons for retaining employees. Also exposure to upcoming technology through attendance at conferences/trade shows.

## Top job families by focus area

Below are samples of the mapping of job roles to respective focus areas and job families:

### Wireless Technology and Network

#### Job Families

- Network strategy(4G/LTE) and architecturee strategist

#### Job Roles

- a) Network strategist\*
- b) Technology Strategist\*
- c) Network architect\*
- d) Enterprise convergence strategist\*

### Fixed Line Technology and Network

#### Job Families

- Network engineering

#### Job Roles

- a) Network optimisation engineer\*
- b) Transmission network engineer\*
- c) Network planner\*

### Information and Network Security

#### Job Families

- Communications and operations

#### Job Roles

- a) Network penetration tester\*
- b) Network security engineer\*
- c) Application security specialist\*

### Emerging Technologies – Cloud Computing and Big Data Analytics

#### Job Families

- Database warehousing

#### Job Roles

- a) Database specialist\*
- b) Data architect\*
- c) Business intelligence specialist



1. Student trends
2. Effectiveness of Telecommunications programmes
3. Industry involvement
4. Level of innovation among students

## 1. Student trends

- ◆ Decline in engineering student intake, especially in E&E engineering field. Secondary school pool of science stream students produced around 30% and a low percentage of such students pursuing engineering related field.
- ◆ Parents role in influencing students' decision on field of study, where engineering perceived to be very technical and unattractive versus business or medicine.
- ◆ Negative CAGR of 4% and 11% student intake in IT and Engineering 2010-3 in both private and polytechnic/community college, but steady increase in IT courses in public universities.
- ◆ Telecommunications companies also hiring graduates with background in Finance, Law, Marketing and even Actuarial Science.
- ◆ In addition to technical capabilities great weight given to attitude and communications skills.

## 2. Effectiveness of Telecommunications programmes

- ◆ Introducing programmes that combine IT or Telecommunications subjects with business and regulatory contents.
- ◆ Institutions face challenges in providing students with practical learning experiences.
- ◆ Insufficiency of lab equipment and lack of exposure to newer and emerging technologies.
- ◆ Including programmes to develop soft skills such as communication skills, English language proficiency, leadership skills, etc.
- ◆ Trendings towards need for graduates to venture into entrepreneurship through platform developments – where basic skills required are data analytics and creativity – but education institutions, in general, are not up to speed in catering for this.

### 3. Industry involvement

- ◆ Institutions review course syllabus every 2 years. Review panel from industry, alumni network and external local and international reviewers to ensure alignment to industry requirements and to benchmark against global standards.
- ◆ Institutions looking for sustained support from industry instructors to participate in lecture series or specific subject matters. Polytechnics and community colleges has the least instructor participation of industry players.
- ◆ Suggestions that philanthropic mind-set lacking from industry players.
- ◆ Need industry support for research and development to introduce and enhance use of new technologies.
- ◆ Greater access to industrial training and attachments effective in exposing students to the working world and impacts the learning experience positively.

#### 4. Innovation among students

- ◆ Institutions introducing a blended approach (a combination of classroom methods and computer-based/mediated activities) to promote innovative mind-set among students.
- ◆ Students encouraged to work in a team, develop out-of-the-box solutions and ultimately articulate their ideas during class presentations.
- ◆ Problem-Based Learning (PBL) questions incorporated in syllabus to harness creativity for deriving solution and problem-solving.
- ◆ Stakeholders feel that more effort required at foundation levels (primary and secondary) to inculcate an innovative mind-set.
- ◆ Greater access to industrial training and attachments effective in exposing students to the working world and impacts the learning experience positively.



## Wage Index

To develop a wage index by occupation and economic sector for Malaysia

## LMIDW & Dashboard

Continue upgrading and updating of core LMIs and their analysis. Generate additional LMIs from establishment data.

## Critical Skills

Continue expanding the COL to TVET related occupations

## Foreign talent and workers

To better understand the labour cost for workers and economic impact of foreign workers in Malaysia

# Thank You



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