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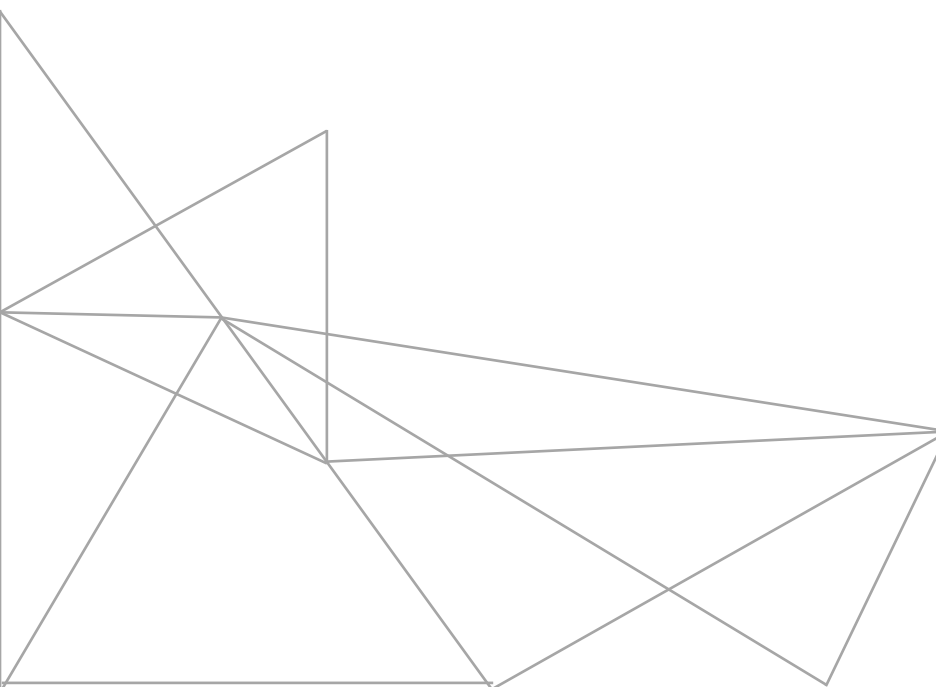
2019

HUMAN RESOURCES DEVELOPMENT FUND (HRDF)

INDUSTRIAL INSIGHTS REPORT



LAND TRANSPORT
AIR TRANSPORT
FREIGHT FORWARDER



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INSIDE

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GENERAL OVERVIEW

HRDF Industrial Insights Report is intended to share the latest training related updates and insights for various industries in Malaysia. More importantly, this report will be crucial for HRDF and other associated stakeholders to learn from the present issues and work towards improving the nation’s human capital development. This report will highlight the general industry outlook, training trends under HRDF and employers’ qualitative feedback. This report covers the importance of the industry, training overview, industry demographics, related skill areas, academic qualifications for current workforce, training challenges and their impacts.

Instead of taking the traditional social science research approach, the method for this report adapted an action research approach inspired by Kurt Lewin’s process, with the aspiration of inducing changes in HRDF to better meet the changing needs of employers registered under HRDF. Using HRDF’s internal data as well as selected employer’s qualitative feedback, insights and recommendations will be provided for the reader’s enlightenment.

Nevertheless, it should be noted that since the content of this report is confined to the context of the selected HRDF subsectors and their registered employers, there is a limitation on the extent of how the contents can be generalised to the overall industries.

This report focuses on the following three (3) industries:

- 1 Land Transport
- 2 Air Transport
- 3 Freight Forwarder

Definition: Commercial land transport, that is, the provision of land public transport services (excluding railway transport services), terminals, facilities, network, systems, operations and other services associated with such land public transport or land public transport services, including the provision of public service vehicles and goods vehicles for carrying passengers or goods, namely the bus, charter bus, express bus, feeder bus, mini bus, stage bus, school bus, excursion bus, airport taxi cab, taxi cab, and hire car, limousine taxi cab, taxi cab, and hire drive car for tourists.

(Source: Pembangunan Sumber Manusia Berhad Act 2001)

GENERAL OUTLOOK

INDUSTRY GROWTH

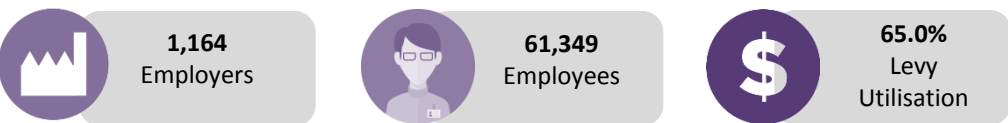
Land transport is the primary transportation mode in Malaysia, covering both the road and rail networks. According to the Economic Outlook 2019 by the Ministry of Finance. The transport and storage subsector is anticipated to expand 5.8% in 2018 forecasted to have 5.5% growth in 2019 led by the land transport segment. With the recent Malaysian Automotive Association (MAA) forecast that the total industry volume of vehicles expected to be at 600,000 units in 2019 and expected revival of major transportation projects such as ECRL, we can expect moderate growth for this industry this year.

IMPORTANCE OF THE INDUSTRY

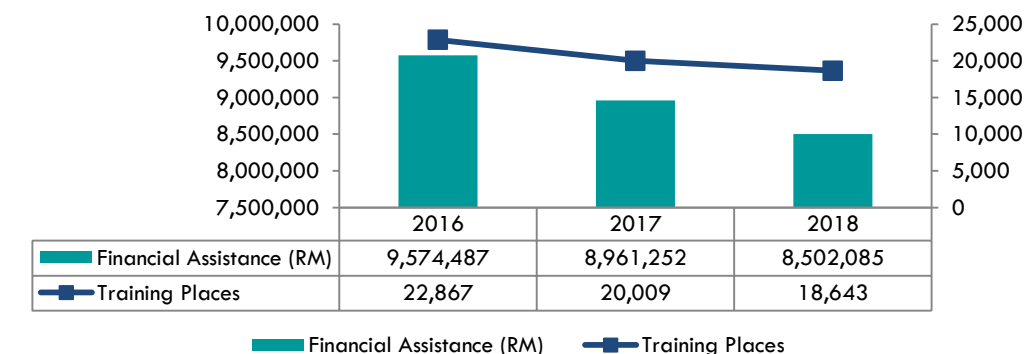
Other than the road safety, productivity of workers, fuel wastage and environmental damage are some of the impacts caused by less efficient management of land transport system. Other than that, businesses that are related to land transport are also affected. For instance, a survey conducted by Parcel Perform showed that Malaysia reports the longest transit time in the South East Asia region, with goods deliveries taking 5.8 days versus a regional average time of 3.3 days. Efficient management of this industry is vital to the overall business ecosystem.

TRAINING OUTLOOK

DEMOGRAPHIC PROFILE OF LAND TRANSPORT SUBSECTOR REGISTERED UNDER HRDF



There were 1,164 registered employers with 61,349 employees of the Land Transport industry registered with Human Resources Development Fund (HRDF). Of the total establishments, 87.5% were Small and Medium Enterprises (SME) and 12.5% were large employers. In terms levy utilisation status, the Land Transport industry expended up to 64.98% of the total levy collected. The detailed breakdown of training places and financial assistance approved for the Land Transport industry starting from year 2016 to 2018 are as per the chart below:



Despite the importance of this industry, it is concerning to see that the financial assistance and training places allocated by the employers are reducing over time. More initiatives from employers are needed to train their employees according to their business needs.

QUICK TAKEAWAYS AND HIGHLIGHTS

We can expect moderate growth for land transport industry in 2019.

Source: Malaysian Automotive Association, Ministry of Finance, 2019

NUMBER OF TRAINING PLACES BY STATE OF EMPLOYERS 2018

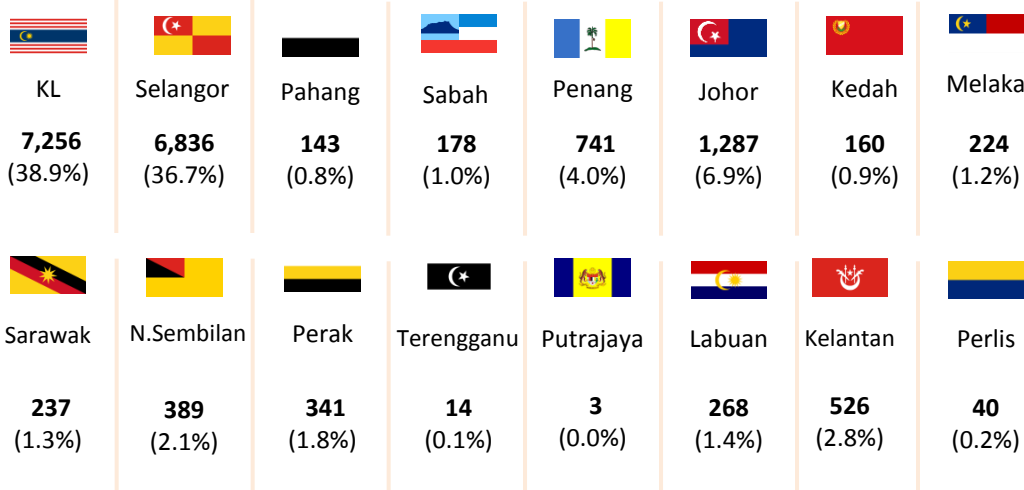
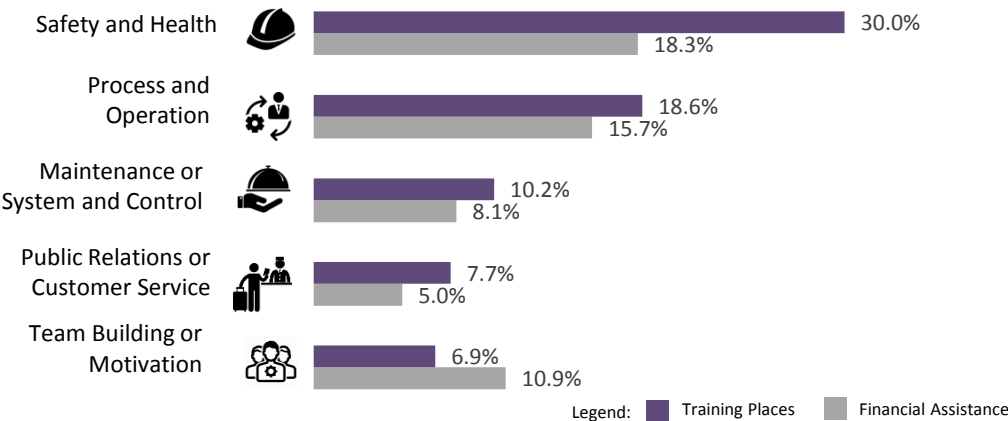


Figure above reveals the number of training places attended by the employees of Land Transport industry according to states. The highest representation of training places was from Kuala Lumpur at 38.9%, followed by Selangor (36.7%) and Johor (6.9%). Overall, there were 18,643 training places approved in year 2018 for this industry.

SKILL AREA

Most of the employers require their employees to have Safety and Health skills. There are also high expectations for Process and Operation, followed by Maintenance or System and Control, Public Relations or Customer Services, and Team Building or Motivation skills. The chart below shows the distribution of skill areas according to the training places and approved financial assistance.



Below shows the public type course fees per training day approved under this industry, divided into three (3) categories:

Courses Cost: 90 th Percentile	
1.	Engineers to Project Management RM1,300 (3 day)
2.	Effective Air Pollution Emission Reduction and Control Management RM1,300 (2 day)
3.	Electrical - Fault Finding - Circuit Analysis, Troubleshooting & Safety RM1,300 (2 day)
Courses Cost: Median	
1.	New Tax Code and GST03 Form Latest Update RM450 (1 day)
2.	Techniques in Credit Evaluation RM450 (1 day)
3.	Sales & Service Tax - Tax Codes & Exemptions RM450 (1 day)
Courses Cost: 10 th Percentile	
1.	Contractor Safety Passport System RM75 (1 day)
2.	Kursus Lesen Memandu Lori Kejur (KELAS E) RM68 (7 day)
3.	Defensive Driving Skill RM31 (1 day)

QUICK TAKEAWAYS AND HIGHLIGHTS

The statistics show that the employers located in major cities contributed to the Land Transport industry (e.g. KL, Selangor and Johor) have higher participation rate in training. This is due to higher demand for transportation in urban areas.

All information (in tables, charts and analytical text) are derived from HRDF internal database (grant and details of employers) for year 2018.

SURVEY FEEDBACK

A qualitative survey was conducted within the Land Transport industry to identify (1) current skills and training needed by the industry; (2) the future challenges, training needs and their impacts on the industry caused by external factors (e.g. technology disruption). Employers from both large and SMEs responded in the survey. It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

SKILL AREA

The list below reveals the top five (5) areas of skills or training needed by some of the Land Transport industry employers for both technical and non-technical skills according to job positions (by MASCO). It shows that this subsector requires the employees to obtain occupational or industrial relevant specialised skills and technical skills.

MASCO	TECHNICAL	NON-TECHNICAL
Skilled Workers	- Computer or Information and Technology - Transport Operations - Mechanical Engineering - Warehousing - Welding	- Communication Skills - Management Skills - Leadership Skills - Problem Solving - Time Management
Semi-Skilled Workers	- Operation Coordination - Logistic Coordination - Computer Skills - Warehousing - Maintenance	- Communication Skills - Documentation Skills - Customer Services Skills - Supervisory Skills - Time Management
Low Skilled Workers	- Driving - Tyre handling equipment - Store Keeping - Data entry - Forklift Handling	- Working Attitude - Teamwork - Communication Skills - Time Management - Documentation Skills

Based on the above list, there are indications that employers within this subsector require their professionals and management to be well-rounded in variety of technical and non-technical skills.

The respondents indicated that the most needed technical skill is “Computer or Information and Technology”, and the most needed industry specific skill is “Operation Coordination”. They are the top-rated skills among skilled and semi-skilled job categories. As the demand for e-hailing and e-commerce services surged, it is expected that the training for such skills need to be given continuously for the drivers as well as training in ICT system maintenance in the organisation.

Among the concerns raised were the ability and skills of the employees in handling equipment and transportation to ensure customer safety. Besides that, training in transportation of certain goods like food, livestock and fragile goods are also important to meet client’s demand.

For non-technical skills, “Communication Skills” and “Time Management” are the most preferred skills among all job categories. Good communication facilitates interactions with customers. Proper time management eases transportation transits.

QUICK TAKEAWAYS AND HIGHLIGHTS

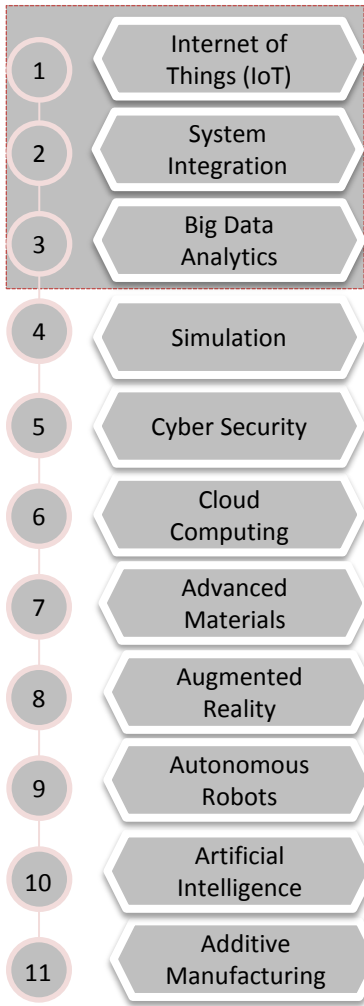
Communication skills are the most preferred non-technical skills among all job categories as good communication facilitates interactions with customers.

All information (in tables, charts and analytical text) are derived from qualitative survey entitled “HRDF Training Needs Survey”.

It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

INDUSTRIAL REVOLUTION 4.0 AND LAND TRANSPORT

The land transport industry is currently amidst technological transformation that will change the way people live and work. Hence, the expectations related to skill sets increased.



Based on the feedback received, 29.0% of the respondents required their employees to be skilled in the areas of “Internet of Thing (IoT)”, “System Integration” and “Big Data Analytics”.

Most of the respondents also require their business to be incorporated with Internet of Things (IoT) and Big Data Analytics because the technology offers a number of benefits that are relevant to the transportation industry like improving safety, reducing congestion, improving access to jobs and services, reducing transportation cost for government and users, and improving accessibility and mobility.

With increasing demand of shortened transit time and to track the status of goods delivery, unsurprisingly IoT, system integration and BDA are among the most welcomed future IR4 trainings. These three pillars in IR 4.0 allow end to end logistics to be more efficient from warehouse management, reducing empty miles to execute rapid response to traffic condition, in order to increase client’s satisfaction.

These outcomes can only be achieved by having access to advance sensor technology for tracking as well as data analysis and management in an integrated system for optimal resource planning. Training in these areas will be vital in this industry.

QUICK TAKEAWAYS AND HIGHLIGHTS

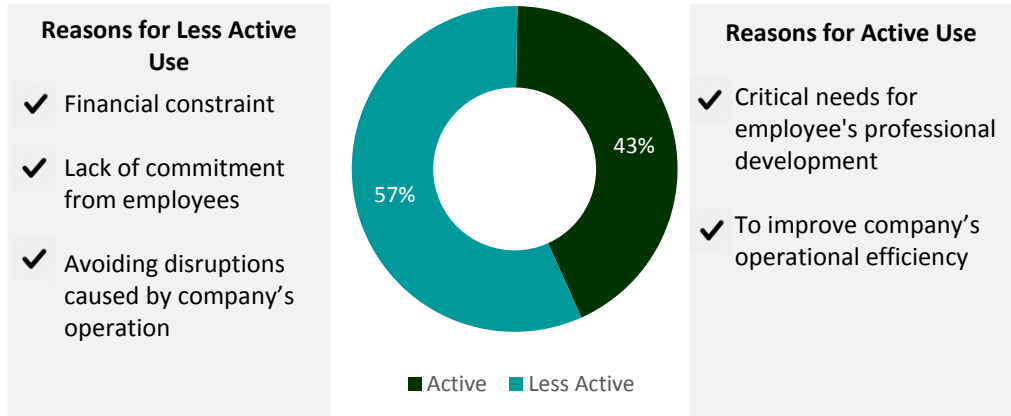
29.0% of respondents rated Internet of Things (IoT), System Integration and Big Data Analytics as the most important skills.

Cloud Computing enables seamless data storage and real time reporting across the value chain.

(Source: Economic Outlook 2019, Ministry of Finance Malaysia)

UTILISATION OF HRDF LEVY

When asked about their participation in training, 72.4% of the employers responded they were actively using the HRDF levy, while 27.6% were less active in utilising their levy. The reasons for the active and less active utilisation are mentioned below:



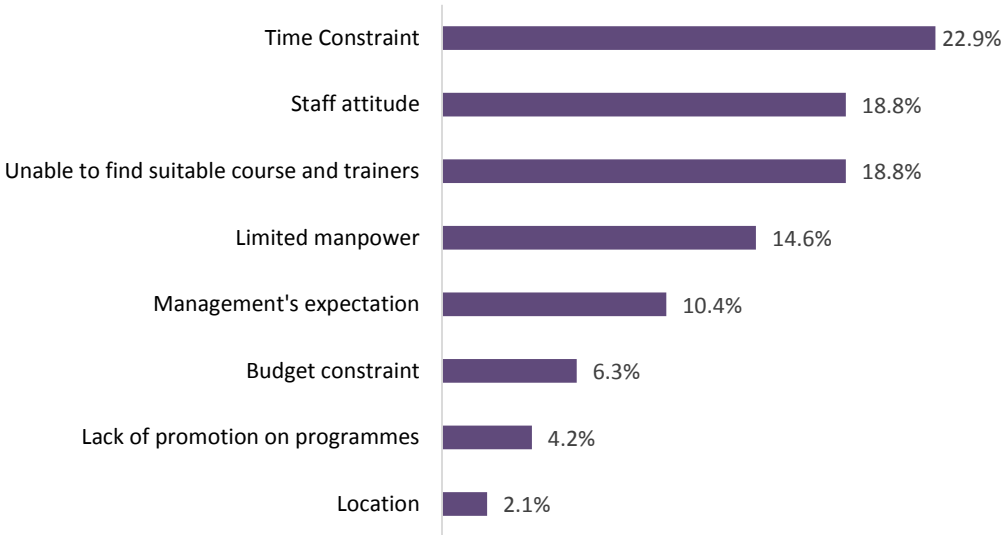
The main reason for less active levy utilisation is financial constraint.

All information (in tables, charts and analytical text) are derived from qualitative survey entitled “HRDF Training Needs Survey”.

It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

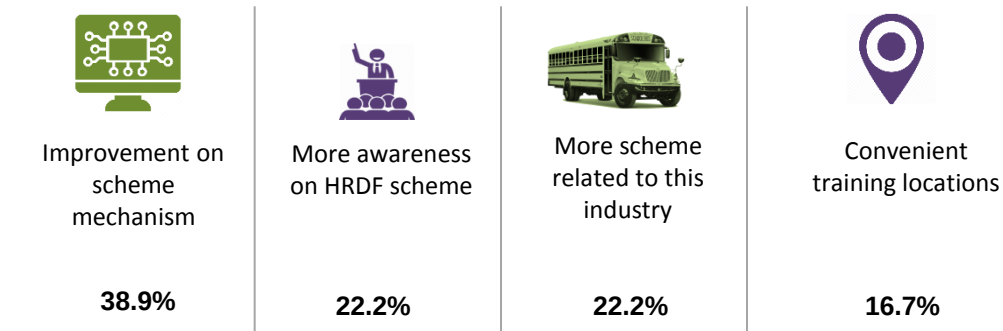
CHALLENGES IN TRAINING

The employers were asked to provide detailed feedback on the challenges faced in training. Based on the analysis, their feedback on challenges in training has been classified into eight (8) themes, as described below. Majority of the respondents (22.9%) highlighted that “Time Constraint” as the main challenge, followed by “Staff Attitude” (18.8%) and “Unable to find suitable course and trainers” (18.8%).



IMPROVEMENT ON HRDF EXISTING SCHEME

Overall, there were four (4) suggestions to improve current HRDF training schemes offered, of which, 38.9% of the respondents suggested on improvement of scheme mechanism. Apart from that, employers are also looking for more awareness on HRDF scheme in terms of promotion and more scheme that are related to land transport industry both at 22.2%. Employers also prefer convenient training locations.



QUICK TAKEAWAYS
AND HIGHLIGHTS

Despite the time constraint, employers may be able to provide more training if industry relevant training is available in close proximity.

All information (in tables, charts and analytical text) are derived from qualitative survey entitled “HRDF Training Needs Survey”.

It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

Definition: Provision of transportation by air, on a fee or contract basis, of passengers or freight whether by regular services or by private charter, including the over-haul, repair, maintenance and cleaning of aircraft.
(Source: Pembangunan Sumber Manusia Berhad Act 2001)

GENERAL OUTLOOK
INDUSTRIAL GROWTH

Passenger traffic increased from 6.2% in 2016 to 8.1% in 2017 (Malaysian Aviation Commission, 2018). According to the Centre for Aviation (CAPA, 2019), passenger traffic in Malaysia grew by only 3% in 2018, indicating a significant slowdown compared to the previous years for Air Transport or Aviation industry.

IMPORTANCE OF THE INDUSTRY

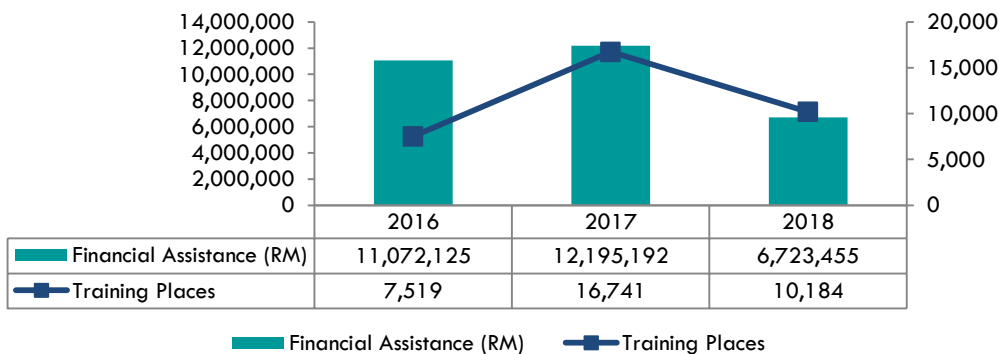
The Air Transport industry is a large and growing industry. Air travelling has been improving with more than 1 billion passengers or travellers in 2008. With globalisation, international trade is about to increase and the needs for passenger and cargo travel are going to increase over time. What matters is that whether these traffics would benefit Malaysia’s aviation industry and Malaysian workers are able to provide services to the international standards.

TRAINING OUTLOOK

DEMOGRAPHIC PROFILE OF AIR TRANSPORT SUBSECTOR REGISTERED UNDER HRDF



There were 80 registered employers with 35,019 employees from Air Transport industry registered with Human Resources Development Fund (HRDF) in the year 2018. Of the total establishments, 65.0% were Small and Medium Enterprises (SMEs) and 35.0% were large employers. In terms of levy utilisation status, the Air Transport industry expended up to 53.9% of the total levy collected, this is considered as very moderate levy utilisation given that air transport is expected to hire more skilled workers. The detailed breakdown of training places and financial assistance approved for the Air Transport industry starting from year 2016 to 2018 are as per chart below:



The trend is concerning where there was almost a 50% reduction in financial assistance for training between 2017 and 2018. Due to intense competition in international market, Malaysia’s airline businesses may suffer and might experience insufficient budget for training.

QUICK TAKEAWAYS AND HIGHLIGHTS

The air transport segment is expected to grow mainly attributed to the introduction of new routes and aircrafts; competitive fares; and expedited visa approvals.

(Source: Economic Outlook 2019, Ministry of Finance Malaysia)

The training levy utilisation is very moderate given that air transport is expected to hire more skilled workers

The trend is concerning where there was almost a 50% reduction in financial assistance for training between 2017 and 2018.

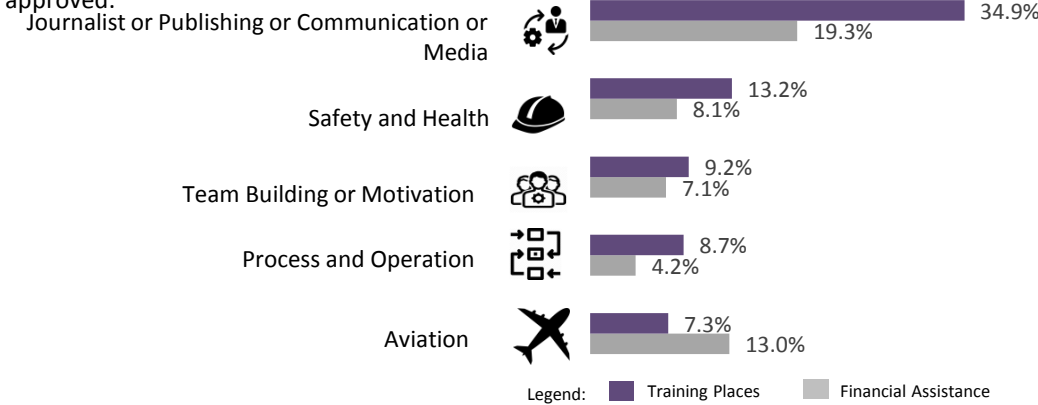
NUMBER OF TRAINING PLACES BY STATE OF EMPLOYERS

 Kuala Lumpur 137 (1.3%)	 Selangor 9,475 (93.2%)	 Pahang 100 (1.0%)	 Sabah 226 (2.2%)	 Penang 28 (0.3%)	 Johor 22 (0.2%)	 Kedah 0 (0.0%)	 Melaka 0 (0.0%)
 Sarawak 137 (1.3%)	 Negeri Sembilan 0 (0.0%)	 Perak 0 (0.0%)	 Terengganu 0 (0.0%)	 Putrajaya 0 (0.0%)	 Labuan 39 (0.4%)	 Kelantan 0 (0.0%)	 Perlis 0 (0.0%)

Figure above reveals the number of training places attended by employees of Air Transport industry according to states. Most (93.2%) of the training attended by the employees were conducted by employers from Selangor. Significant differences can be seen when comparing other states where the second highest training places were concentrated in Sabah (2.2%) followed by Kuala Lumpur and Sarawak with 1.3% respectively. Apart from that, the other eight (8) states have no **training** places recorded as there were no registered employers were recorded under the Air Transport industry in those states.

SKILL AREA

34.9% of the employees under Air Transport industry have attended either Journalism, Publishing, Communication or Media related training courses, followed by Safety and Health related programmes by 13.2% and Team Building or Motivation at 9.2%. The chart below shows the distribution of skill areas according to training places and financial assistance approved.



Below are the public type course fees per training day approved under this industry, divided into three (3) categories:

Courses Cost: 90 th Percentile	
1.	Life Vest Acc: Comfort, Onboard Systems and Safety of Aircraft RM7,144 (1 day)
2.	Beechcraft B1900D Pilot RM4,739 (1 day)
3.	Aviation Finance RM4,613 (1 day)
Courses Cost: Median	
1.	Logistic and Store Inspection Procedures RM715 (1 day)
2.	Production Planning and Control Training RM715 (1 day)
3.	Leadership & Team Management Skills RM710 (1 day)
Courses Cost: 10 th Percentile	
1.	Dangerous Goods Regulations RM73 (1 day)
2.	Analyzing Data With Power Bi RM55 (1 day)
3.	Kursus Pengendalian Makanan RM18 (1 day)

QUICK TAKEAWAYS AND HIGHLIGHTS

There were only eight (8) states with registered employers under Air Transport industry with total of 80 registered employers in 2018.

(Source: HRDF Data, 2019)

The skill area trend among air transport employers is rather interesting in journalism and communication is the main skill area trained. More studies are needed to understand the underlying reasons as this is counterintuitive where it is expected that industry would prefer to train industry specific skills such as aviation.

SURVEY FEEDBACK

A qualitative survey was conducted within the Air Transport industry to identify (1) current skills and training needed by the industry; (2) the future challenges, training needs and their impacts on the industry caused by external factors (e.g. technology disruption). Employers from both large and SMEs responded in the survey. It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

SKILL AREAS

The list below reveals the top areas of skills or training needed by some of the Air Transport industry employers for both technical and non-technical skills according to job positions (by MASCO). It shows that this subsector requires the employees to obtain occupational or industrial relevant specialised skills and technical skills.

MASCO	TECHNICAL	NON-TECHNICAL
Skilled Workers	1. Airline & Commercial Pilot 2. Design Engineering 3. Flight Operation 4. Cabin Crew 5. Safety	1. Quality Assurance 2. Business/ Revenue Development 3. Facility Management 4. Leadership 5. Customer Engagement
Semi-Skilled Workers	1. Aviation Security 2. Continuing Airworthiness 3. Ground Handling 4. Program Administration 5. Ergonomics & Manual Handling	1. Sales and Marketing 2. Problem Solving 3. Clerical and Administration 4. Call Centre 5. First Aid, CPR & AED
Low Skilled Workers	1. Baggage Handling 2. Catering 3. Driving Truck 4. Dispatch 5. Safety	1. Communication 2. Emergency Response Plan 3. Teamwork 4. 5S Awareness

Based on the above list, there are indications that employers within this industry require their professionals and management to be well-rounded in a variety of technical and non-technical skills.

For Technical skills, all levels of occupations were focused on Safety and Security skills as it is required in the Air Transport and Aviation industries. Furthermore, as the industry’s nature is dealing with passengers and cargo, hence the safety and security must be taken into account to ensure its services provided. In addition, it is expected that future main skills needed will be focused on Maintenance, Repair & Overhaul (MRO) as Airbus and Selangor has started setup an aircraft recycling centre and this segment is expected to grow in future.

For Non-Technical skills, all job categories require different skills. However, communication skills are the most needed for all job categories as the industry is dealing with customers and requires customer engagement and marketing in promoting their airline services.

QUICK TAKEAWAYS AND HIGHLIGHTS

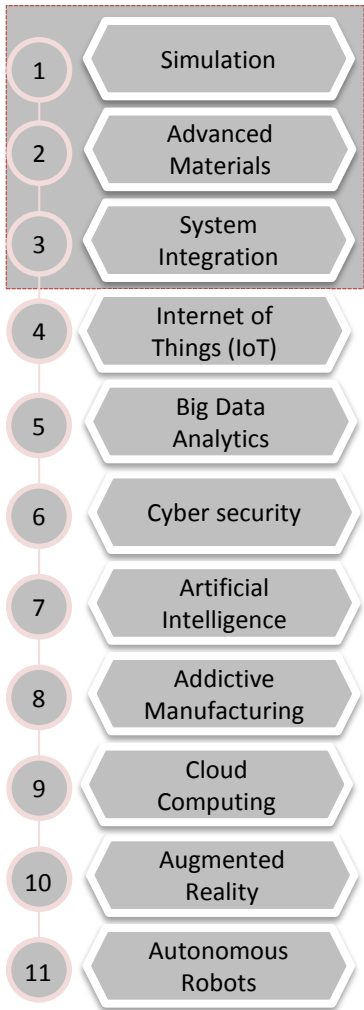
There is an indication that all level of occupations in the Air Transport subsector requires Safety and Security as part of their Technical area of skills in this industry.

All information (in tables, charts and analytical text) are derived from qualitative survey entitled “HRDF Training Needs Survey”.

It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

INDUSTRY 4.0

The Air Transport industry is among the early adopter of smart manufacturing, now known as Industry 4.0.



Based on the feedback received, 57.1% of the respondents require their employees to be skilled in the area of Simulation. Besides that, Advanced Materials and System Integration are also areas of Industry 4.0 that are relevant for this industry in supporting its revolution.

The respondents viewed that the most important pillar in Industry 4.0 is Simulation as it is the established method of training in the field, for instances, pilot. Furthermore, simulation is being used to optimise the design of aircraft and its engine. Hence, the industry is highly on demand for simulation compared to the other pillars of Industry 4.0.

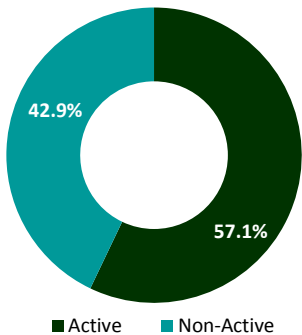
Most of the respondents also require their airlines to be incorporated with Internet of Things (IoT), because the technology offers a number of crucial benefits that are especially relevant to the airline industry. So far, the main use of the IoT within the industry was for tracking tools on the assembly line, sourcing information about their position and measuring data to a central database. Besides that, Advanced Materials and System Integration are also areas of Industry 4.0 that are relevant to this industry in support of its revolution.

UTILISATION OF HRDF LEVY

When asked about their participation in training, 57.1% of the employers have responded they were actively using the HRDF levy, while 42.9% were less actively utilising their levy. The reasons for the active and less active utilisation are as mentioned below:

Reasons for Less Active Use

- ✓ Financial constraint
- ✓ Budget limitation
- ✓ Focusing on aircraft maintenance
- ✓ Training provided by internal training centre
- ✓ Repetitive courses conducted by internal trainers



Reasons for Active Use

- ✓ Training fund is useful and benefited the companies
- ✓ Regulatory training is necessary and to conduct adequate training every year
- ✓ Low levy contribution, hence maximise the utilisation

QUICK TAKEAWAYS AND HIGHLIGHTS

57.1% of respondents have rated Simulation skills as the most important skill.

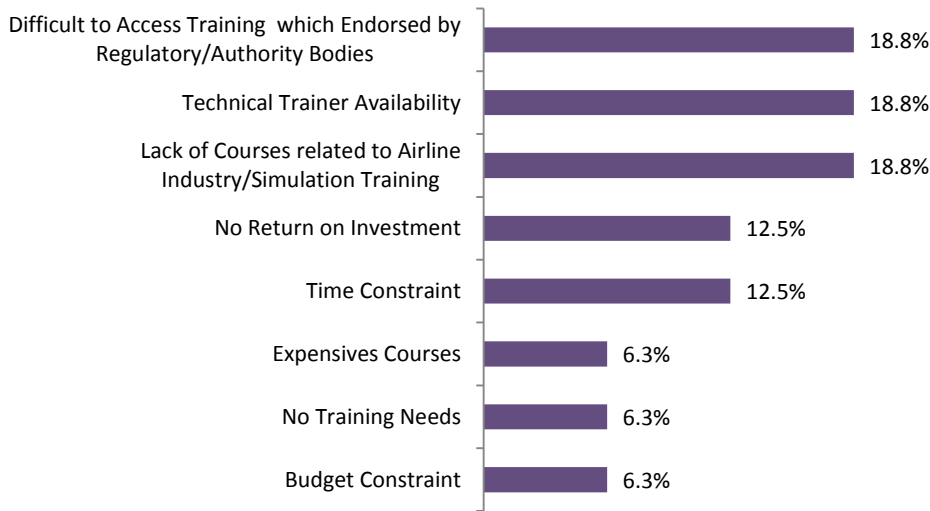
Regulatory training that is endorsed by the authorities is one of the factors contributing to the activeness of the industry in utilising HRD levy fund.

All information (in tables, charts and analytical text) are derived from qualitative survey entitled “HRDF Training Needs Survey”.

It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

CHALLENGES IN TRAINING

The employers were asked to provide detailed feedback on the challenges faced in training. Based on the analysis, their feedback on challenges in training has been classified into eight (8) themes, as described below. Top challenges faced by the majority of the respondents (18.8%) were the difficulties to access training endorsed by authorised bodies, lack of technical trainers and lack of airline/simulation related courses. This is followed by time constraint and no return on investment after attending the training (12.5%).



IMPROVEMENT ON HRDF EXISTING SCHEME

Overall, there are three (3) suggestions to improve current HRDF training schemes offered, of which, 60.0% of the respondents suggested to have flexibility in HRDF allowable cost for high cost Aviation training. Apart from that, 27.0% of employers are also looking for more local courses related to air transport and aviation.



Flexibility in HRDF allowable cost for high cost Aviation training

60.0%



More courses related to Air Transport / Aviation Industries

27.0%



Prefer all training programmes registered under Skim Bantuan Latihan Khas (SBL-Khas)

13.0%

QUICK TAKEAWAYS
AND HIGHLIGHTS

The main constraint in conducting trainings for Air Transport is the availability of technical courses and trainers.

Due to the technicality of most of the courses by Aviation industry, the course fees are high in cost.

All information (in tables, charts and analytical text) are derived from qualitative survey entitled “HRDF Training Needs Survey”.

It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

Definition: Any arrangement of freight by air, sea or land from the port of loading / origin to the port of discharge/destination, or the provision of total logistics activities, and includes the business of a forwarding agent, that is a business involving activities for the obtaining of customs clearance for freight, but does not include delivery transportation by business units for their own use.
(Source: Pembangunan Sumber Manusia Berhad Act, 2001)

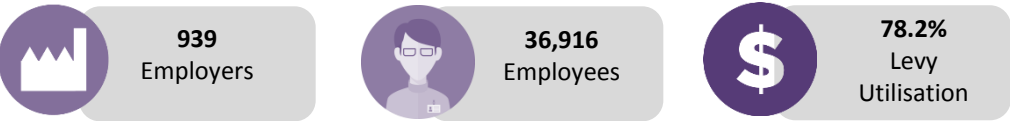
GENERAL OUTLOOK
GDP: DIRECT CONTRIBUTION

In 2013, the Freight Forwarder subsector contributed MYR 28.6 billion (constant 2005 price) to Malaysia’s GDP, accounting for 3.63% of national GDP.
(Source: Logistic and Trade Facilitation Masterplan (2015-2020))

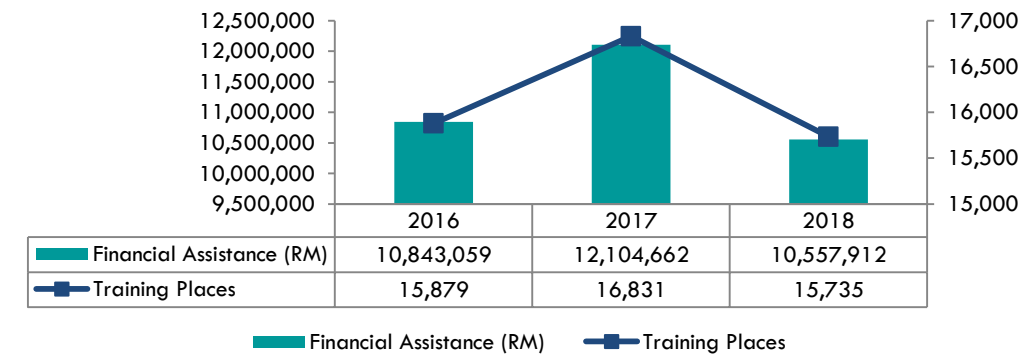
IMPORTANCE OF THE INDUSTRY
The logistics industry in Malaysia has evolved in recent years. With the rise of e-commerce in the country, companies are capitalising on this emerging trend. The interest of the companies in emerging areas, such as cold chain logistics, last mile delivery services, etc. is growing, due to the high margins and rising demand. The economy of the country is expected to grow between 5% and 6%, driving the growth of the logistics industry further. As the growth of the logistics sector is expected to be positive in the future, there is much scope for improvement - (1) to enable the logistics sector to handle greater volumes of freight, (2) to speed up the time taken to deliver goods across the supply chains, and (3) to lower the cost of delivery. While the logistics infrastructure of the country is improving, there is a need for continuous investment into infrastructures, such as port upgrades and expansion, road networks, and advanced information technology (IT) system.

TRAINING OUTLOOK

DEMOGRAPHIC PROFILE OF FREIGHT FORWARDER SUBSECTOR REGISTERED UNDER HRDF



There were 939 registered employers with 36,916 employees in the Freight Forwarder industry registered with Human Resources Development Fund (HRDF). Of the total establishments, 86.0% were Small and Medium Enterprises (SMEs) and 14.0% were large employers. In terms of levy utilisation status, the Freight Forwarder Industry expended up to 78.2% of the total levy collected. The detailed breakdown of training places and financial assistance approved for the Freight Forwarder industry starting from year 2016 to 2018 are as per the chart below:



QUICK TAKEAWAYS AND HIGHLIGHTS

The key strengths of Malaysia that favour the country as a key logistics link to Asia can be grouped under the following:

- Strategic geographical location
- Economic growth
- Regional supply chain linkages
- Strength of transportation services.

(Source: Logistic and Trade Facilitation Masterplan (2015-2020))

The Freight Forwarder industry registered under HRDF was dominated (86.0%) by Small and Medium Enterprises (SMEs). As such, due to the limitation of HRDF levy and incentive from Pool Fund, the training trend decreased in year 2018.

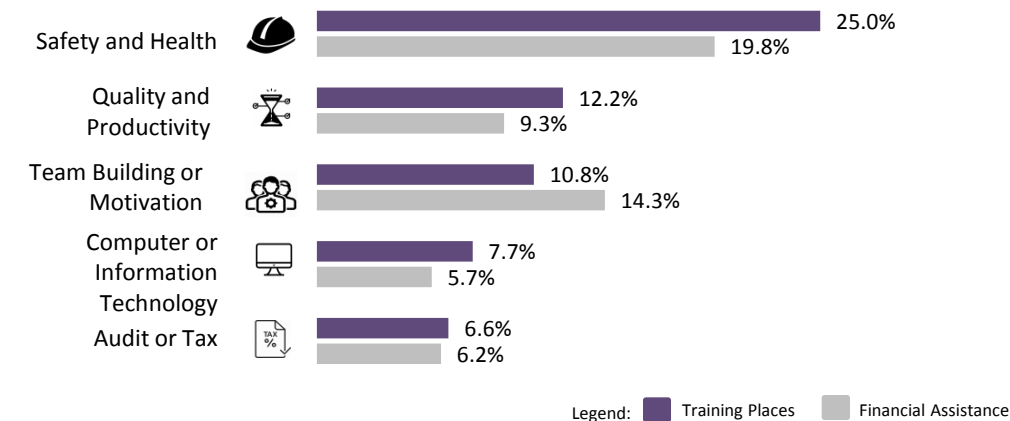
NUMBER OF TRAINING PLACES BY STATE OF EMPLOYERS

							
KL	Selangor	Pahang	Sabah	Penang	Johor	Kedah	Melaka
894 (5.7%)	8,732 (55.5%)	637 (4.0%)	275 (1.7%)	1,886 (12.0%)	1,550 (9.9%)	327 (2.1%)	126 (0.8%)
							
Sarawak	N.Sembilan	Perak	Terengganu	Putrajaya	Labuan	Kelantan	Perlis
189 (1.2%)	595 (3.8%)	304 (1.9%)	94 (0.6%)	70 (0.4%)	16 (0.1%)	0 (0.0%)	0 (0.0%)

Figure above reveals the number of training places attended by employees of Freight Forwarders subsectors according to states. Most of the training attended by the employees was conducted in Selangor (55.5%), followed by Penang (12.0%) and Johor (9.9%). Apart from the above number, 40 (0.3%) training places were not recorded in any states.

SKILL AREA

25.0% of employees under this subsector have attended Safety and Health programme, followed by Quality and Productivity skills (12.2%) and Team Building or Motivation (10.8%). The chart below shows the distribution of skill area according to the training places and financial assistance approved.



Below are the public type course fees per training day approved under this industry, divided into three (3) categories.

Courses Cost: 90th Percentile

- GST 6% to 0% Transitioning & Sales & Service Tax (SST) 2018:Indirect Tax Regime RM1,300 (1 day)
- Social Media Marketing RM1,300 (1 day)
- ISO 45001:2018 Interpretation and Application RM1,300 (1 day)

Courses Cost: Median

- Employment Insurance System RM500 (1 day)
- Sales & Service Tax Frameworks RM500 (1 day)
- Kursus Ejen Perkapalan RM500 (1 day)

Courses Cost: 10th Percentile

- Contractor Safety Passport Systems RM75 (1 day)
- Port Week 2018 Conference : Ports and Logistics 2025 RM50 (1 day)
- Safe Handling of Chemicals at Work RM50 (1 day)

QUICK TAKEAWAYS AND HIGHLIGHTS

Major multinational companies have regional offices and manufacturing plants located in Malaysia. Among them are Western Digital, Dell, Schlumberger, Seagate, Microsoft, IBM, Siemens, Toyota, BMW, Samsung, Keppel Corporation and Temasek Holdings. These companies, mostly located in Selangor and Penang, which are part of the global supply chain, which could drive higher demand for efficient logistics services.

(Source: Logistic and Trade Facilitation Masterplan (2015-2020))

The average course fee for the training programme under this industry is RM796.

SURVEY FEEDBACK

A qualitative survey was conducted within the Freight Forwarder industry to identify (1) current skills and training needed by the industry; (2) the future challenges, training needs and their impacts on the industry caused by external factors (e.g. technology disruption). Employers from both large and SMEs responded in the survey. It should be noted that the empirical results reported has limitations as it does not cover all the employers within the selected industries.

SKILL AREA

The list below reveals the top five (5) areas of skills or training needed by some of the Freight Forwarder industry employers for both technical and non-technical skills according to job positions (by MASCO). It shows that this subsector requires the employees to obtain occupational or industrial relevant specialised and technical skills.

MASCO	TECHNICAL	NON-TECHNICAL
Skilled Workers	1. Logistic Management 2. Accounting Services Tax 3. Marketing & Negotiation 4. Dangerous Good Regulation 5. Import & Export Skills	1. Communication Skills 2. Supervisory Skills 3. Problem Solving & Decision Making 4. Customer Service 5. Time Management
Semi-Skilled Workers	1. Warehousing 2. Safety 3. Purchasing 4. Marketing 5. Packaging Skills	1. Communication Skills 2. Teamwork Skills 3. Customer Service Skills 4. Time Management Skills 5. English Proficiency
Low Skilled Workers	1. Forklift Handling 2. Loading & unloading 3. Safety workplace 4. Basic computer 5. System process	1. Communication Skills 2. Time Management 3. Customer Service Skills 4. Teamwork 5. Marketing

Based on the above list, there are indications that employers within this subsector require their professionals and management to be well-rounded in a variety of technical to non-technical skills.

The respondents responded that the most needed industry specific skills include Logistic Management and Warehousing. Warehousing and warehouse management are crucial parts of a global logistics management system. Warehousing is an essential component in supply chain management. Warehouses in freight forwarding refers to the locations used for the storage of goods.

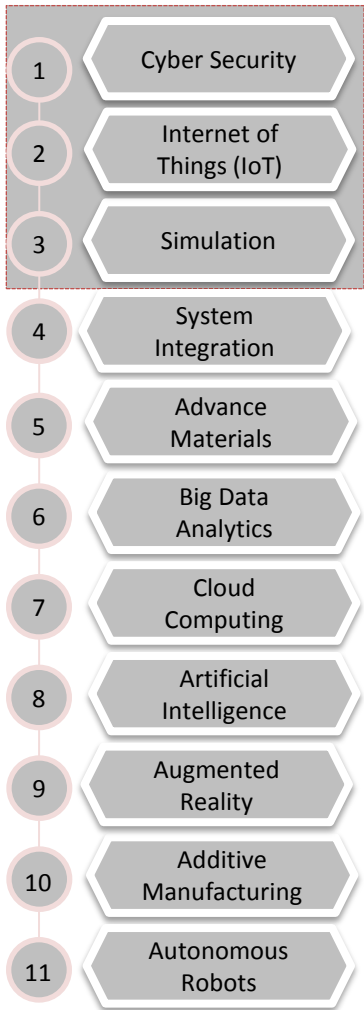
For non-technical skills, “Communication Skills” are the most preferred skills among the skilled and low-skilled workers.

QUICK TAKEAWAYS AND HIGHLIGHTS

All levels of occupations in Freight Forwarder Industry requires Communication Skills as part of their Non-Technical Programmes.

INDUSTRY 4.0

The Freight Forwarder industry is currently amidst technological transformation that will change the way people live and work. Hence, the expectations related to skill sets have increased.



Based on the feedback received, 29% of the respondents required their employees to be skilled in the areas of “Cyber Security”, “Internet of Things (IoT)” and “Simulation”.

The low percentage of feedback indicated that the adoption rate of advanced technology among Freight Forwarder industry is still minimal. This is aligned with the challenges highlighted by the Logistic and Trade Facilitation Masterplan (2015-2020), and Malaysia being ranked at the 60th position from the 144 economies assessed for Technological Readiness based on the Global Competitiveness Index Report 2014-2015.

The low awareness to technological adoption is worrying as this industry could be lagging behind if it's not striving to be competitive for future development.

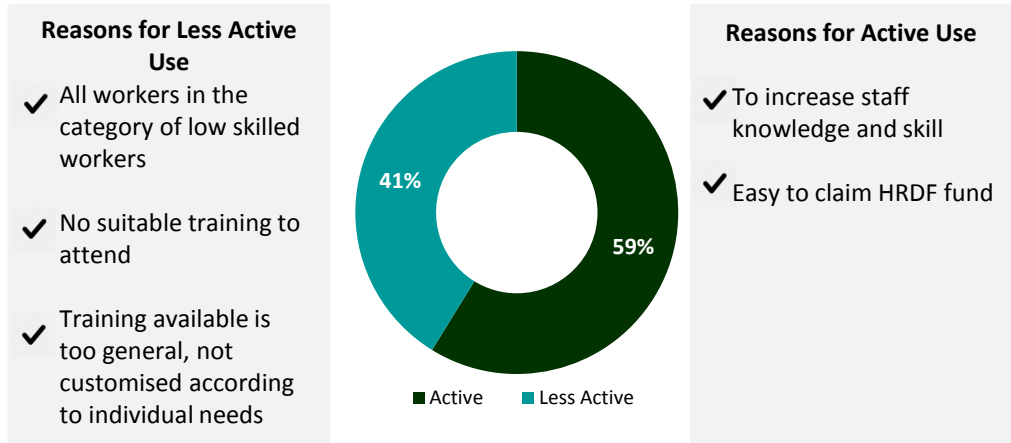
QUICK TAKEAWAYS AND HIGHLIGHTS

The respondents rated “Cyber Security” as one of the important pillar to support Industry 4.0 due to goods security issues involving cargo theft and hijacking, smuggling and documentation fraud.

(Source: Logistic and Trade Facilitation Masterplan (2015-2020))

UTILISATION OF HRDF LEVY

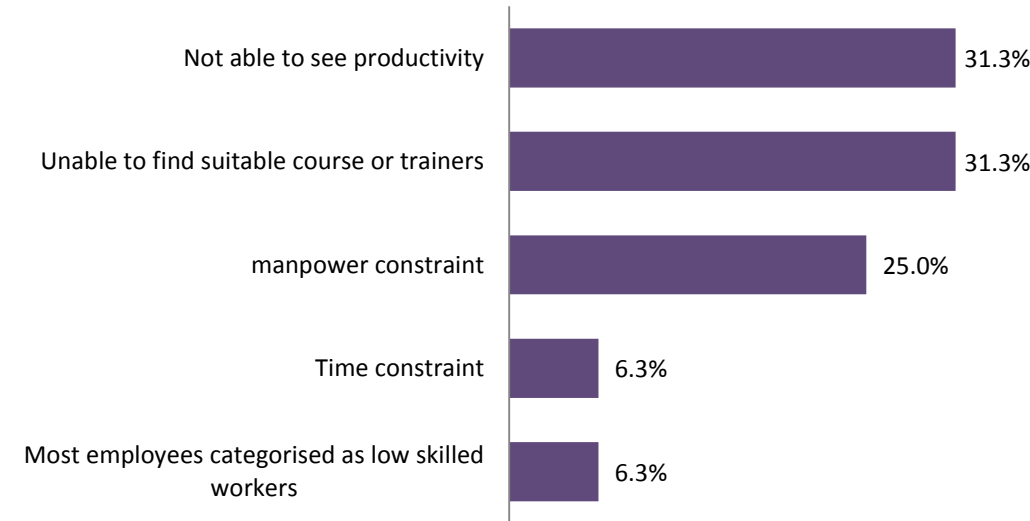
When asked about their participation in training, 58.8% of the employers responded they were actively using HRDF levy, while 41.2% were less actively utilising their levy. The reasons for the active and less active utilisation are mentioned below:



The main reason for less active levy utilization is due to majority of workers in the subsector were categorised as low skilled workers.

CHALLENGES IN TRAINING

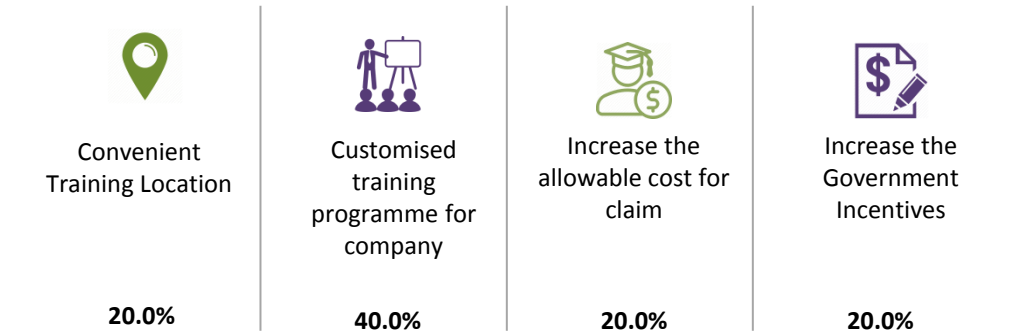
The employers were asked to provide detailed feedback on the challenges faced in training. Based on the analysis, their feedback on challenges in training has been classified into five (5) themes, as described below. Top challenges faced by the majority of the respondents (31.3%) include “Not able to see productivity” and “Unable to find suitable course or trainers”. This is followed by “Manpower constraints” (25.0%).



The feedback on challenges from this industry is particularly interesting as they have cited not being able to see productivity from training, while most of the time employers will find training to be beneficial to their organisation in terms of productivity. Further study is needed to find out what are the main reasons for such feedback as there is a possibility where either training providers related to this industry may not prove to be effective, or the employers may have sent their employee to less relevant training.

IMPROVEMENT ON HRDF EXISTING SCHEME

Overall, there are four (4) suggestions to improve current HRDF training schemes offered, of which, 20.0% of the respondents suggested to have flexibility in source of training funds especially related to this subsector. Apart from that, 13.3% of employers are also looking for e-learning coverage to all levels of certification.



QUICK TAKEAWAYS
AND HIGHLIGHTS

Referring to the Logistic and Trade Facilitation Masterplan (2015-2020), strengthening the capabilities of logistics service providers through training and accreditation programmes are being the focused strategies of Ministry of Transportation (MOT) to achieve 4% contribution to national GDP by 2020.

(Source: Logistic and Trade Facilitation Masterplan (2015-2020))

ANALYSIS BY GEOGRAPHY AND ESTABLISHMENT SIZE

8.3% (2,183) out of 26,281 HRDF registered employers in year 2018 were from the Land Transport, Air Transport and Freight Forwarder industries. In terms of establishment size, these three (3) subsectors have **lower** representatives from the large establishments (14.0%) compared to Small and Medium Enterprises (86.0%). Most of the registered employers within these subsectors are located in Central Malaysia (e.g. Kuala Lumpur and Selangor).

OVERALL TRAINING ACTIVITY

All three subsectors achieved moderate levy utilisation. The highest levy utilisation was recorded by Freight Forwarder Industry (78.2%), followed by the Land Transport (65.1%) and Air Transport (53.9%). Based on the feedback received from the study, the main challenge faced by the transportation services subsector in training is the inability to find suitable courses and expert trainers. They also encourage HRDF to introduce additional training schemes related to Transportation Services.

LEARNING AND DEVELOPMENT PERSPECTIVE

The report indicated that “Safety and Health” skill remains as a priority within the transportation industry. It is because high safety levels are necessary for protecting the customers and their personal belongings.

Apart from that, “Process and Operation”, “Quality and Productivity” as well as “Maintenance or System and Control” are among the skills required in the transportation industry in order to reduce congestion, improve services, accessibility and mobility.

All three subsectors indicated that the required skills are related to the transportation industry needs. For example, Land Transport required “Public Relations or Customer Services” to improve engagements with their customers and provide the best service. Air Transport needs “Aviation” and “Journalist or Publishing or Communication” to communicate effectively with passengers and cargo. Freight Forwarder needs “Computer or Information and Technology” and “Audit and Tax” to improve security and ensure tax is incorporated into accounts respectively. “Team Building” is another needed skill to improve employees’ personal effectiveness in the service sector.



QUICK TAKEAWAYS
AND HIGHLIGHTS

“Safety and Health” skill is a priority as high safety levels are necessary for protecting the customers and their personal belongings.

LAND TRANSPORT	AIR TRANSPORT	FREIGHT FORWARDER
1. Safety and Health	1. Journalist or Publishing or Communication or Media	1. Safety and Health
2. Process and Operation	2. Safety and Health	2. Quality and Productivity
3. Maintenance or System and Control	3. Team Building or Motivation	3. Team Building or Motivation
4. Public Relations or Customer Services	4. Process and Operation	4. Computer or Information and Technology
5. Team Building or Motivation	5. Aviation	5. Audit or Tax

TOWARDS INDUSTRY 4.0

The Fourth Industrial Revolution is expanding on the back of a range of technologies that are blurring the distinction among physical, digital and biological spaces. Industry 4.0 transforms how products are designed, fabricated, used and operated as well as how they are maintained and serviced. It also transforms the operations, processes, supply chain management and energy footprint of factories.

(Source: Industry4wrd, Ministry of International Trade and Industry)

HRDF’S REGISTERED EMPLOYERS READINESS FOR INDUSTRY 4.0

The key question is ‘Is the transportation industry ready for Industry 4.0?’. The findings based on “HRDF Training Needs Survey” indicated that below 50% of the surveyed companies in these three subsectors are considering to participate in training related to Industry 4.0 in year 2020. The majority of HRDF employers are from Small and Medium Enterprises (SMEs). Huge capital needs to be injected into their business to support them during rapid technological developments.

Land Transport subsector would require their employees to be skilled in “Internet of Things (IoT)”, “System Integration” and “Big Data Analysis” areas. Whereas, Air Transport subsector in “Simulation”, “Advance Material” and “System Integration” skills and Freight Forwarder subsector in “Cyber Security”, “Internet of Things (IoT)” and “Simulation”.



LAND TRANSPORT	AIR TRANSPORT	FREIGHT FORWARDER
Internet of Thing (IoT)	Simulation	Cyber Security
System Integration	Advance Material	Internet of Things (IoT)
Big Data Analysis	System Integration	Simulation

As the complexity of the job increases, the respondents indicated that “Internet of Things (IoT)” is one of the major skill needed by Land Transport and Freight Forwarder. It incorporates technology to collect information about processes, equipment performance, and supplies and orders.

“Cyber security” is anticipated as an important skill for Freight Forwarder as this industry have to manage and secure customers’ personal data exchange through the use of IoT.

“Simulation” is also anticipated as an important skill for Air Transport and Freight Forwarder subsectors due to technological innovations. Simulation can be applied in transportation planning, design and operations. In transportation planning, simulation models evaluate the impacts of regional urban development patterns on the performance of transportation infrastructure.

The Land Transport indicated “System Integration” and “Big Data Analytics” are the fastest tools to manage the unpredictable volume of requests seen today. Air Transport anticipated skills in “Advance Material” would lead the subsector to explore new ideas related to composite materials, structures for transporting aircraft and applications of nanotechnologies to transport aircraft.

QUICK TAKEAWAYS
AND HIGHLIGHTS

There is a need to have a comprehensive regulatory framework in cybersecurity.

(Source: World Bank, 2018)

There are rooms for improvement, especially in developing best practices and guidelines to manage security as well as cloud security services in Malaysia.

(Source: World Bank, 2018)

A safe and sound ecosystem is crucial to establish the trust of customers and users to enhance e-commerce and e-payment platforms further. The value of Malaysia’s overall cyber security services is expected to reach USD632.6 million by 2021.

(Source: MDEC, 2018)

DISRUPTIVE TECHNOLOGY IN TRANSPORTATION INDUSTRY

Technological innovations are advancing and transforming the trends of transportation, challenging businesses to be more prominent and efficient. Advanced Digital Technology such as Big Data Analytics (BDA), artificial intelligence (AI), Internet of Things (IoT) and cloud computing would be assisting and enhancing the business and individuals capabilities. Disruptive technology will change the way society live, work and play. Adopters of these technologies are transforming Transportation industry by providing more flexible, precise, higher quality and customised services.

Disruptive technology multiplies growth in the digital economy and optimises digital investment. In line with this, many firms are benefiting from digital advancement to improve their operations and business models. Leading global firms are embarking on various initiatives like Airbnb and Trivago in the hotel industry; LAZADA and Alibaba in retail; GRAB in the transportation sector.

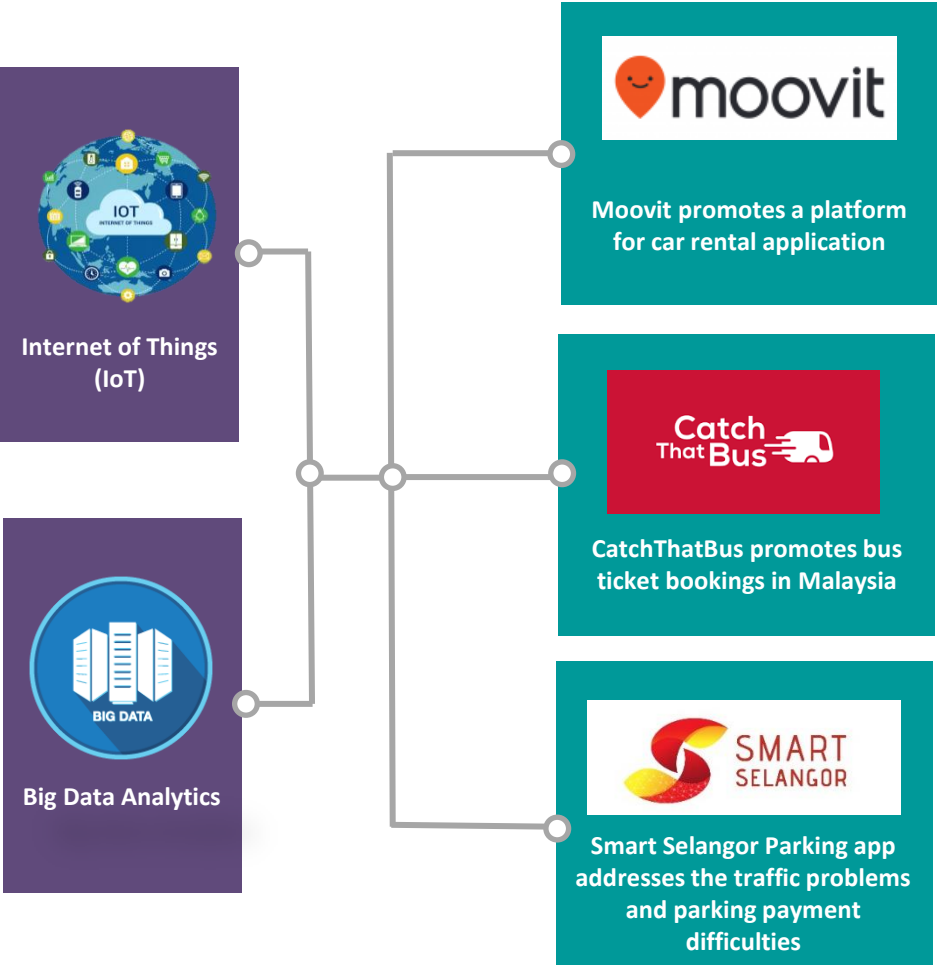
APPLICATION OF INTERNET OF THINGS (IoT) AND BIG DATA ANALYTICS IN TRANSPORTATION INDUSTRY

E-hailing companies are focusing to strengthen their app registration system to improve the safety of its drivers and passengers. For example, through IoT - Moovit promotes a platform for car rental application, while CatchThatBus for booking bus tickets in Malaysia. In addition, the Smart Selangor Parking app was developed to address the traffic problems and parking payment difficulties. By utilising IoT and BDA, the Smart Selangor Parking app allows the enforcement officers to check if the parking fees have been paid by scanning the car registration number. At the same time, enforcement officers can issue compounds and enable offenders to make immediate payment through the app.

QUICK TAKEAWAYS
AND HIGHLIGHTS

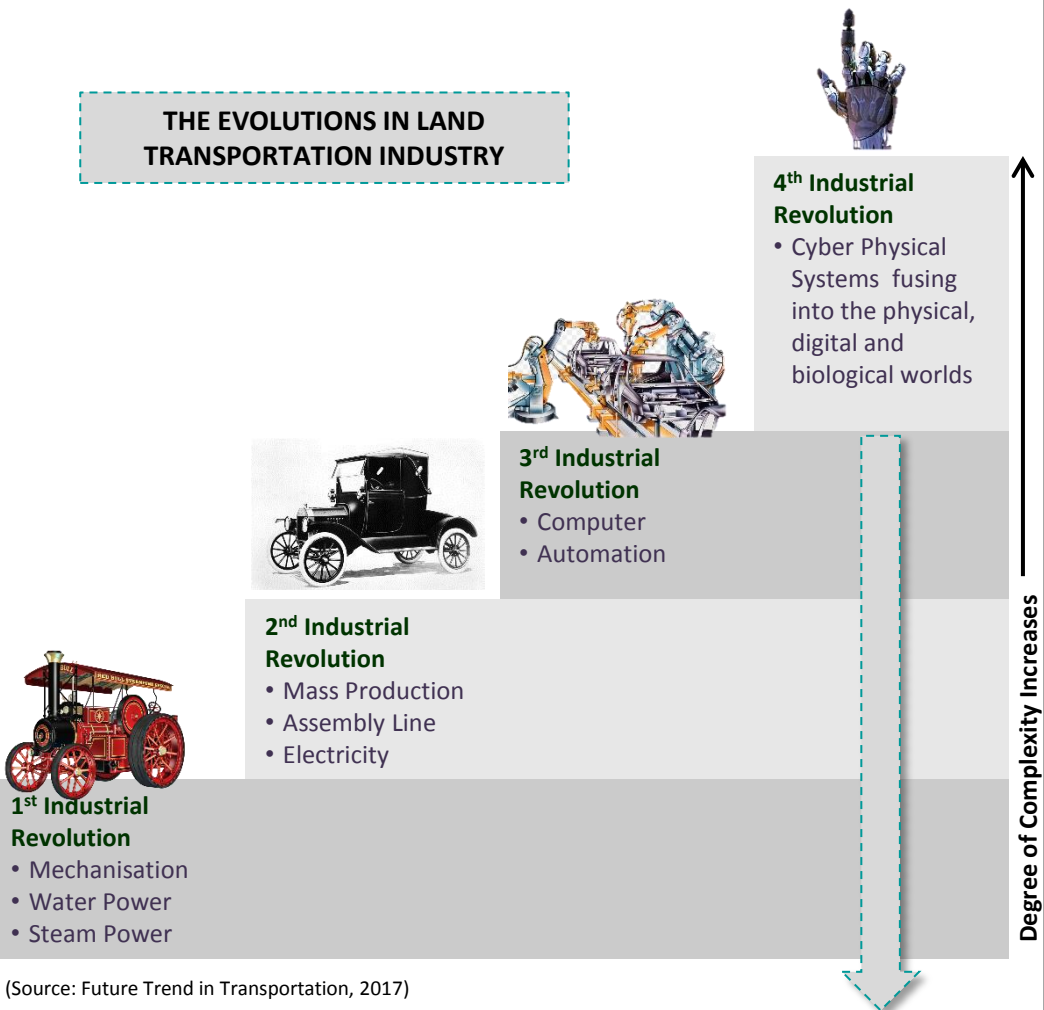
The transportation account is projected to remain in deficit at RM30 billion in 2019, followed by continued reliance on foreign freight services. Gross payments for transport services are forecasted to increase 2.3% to RM50 billion due to higher fuel and freight cost. Gross receipts are anticipated to be broadly sustained at RM20 billion supported by continued earnings from passengers fares, airport and port charges (like aircraft landing and parking, ship docking, cargo handling, maintenance and repair works provided by domestic companies).

(Source: Economic Outlook 2019, Ministry of Finance Malaysia)

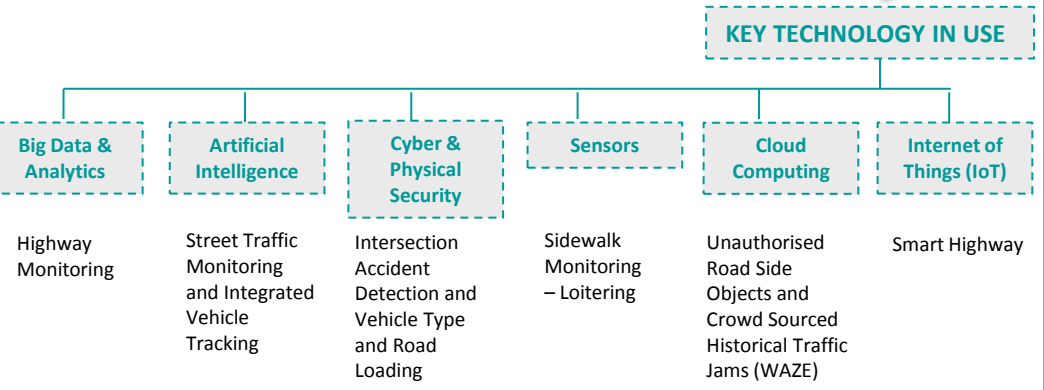


(Source: Economic Outlook 2019, Ministry of Finance Malaysia)

THE USE OF TECHNOLOGY IN LAND TRANSPORTATION INDUSTRY



(Source: Future Trend in Transportation, 2017)



CHALLENGES

Rapid technological development and low implementation remain as a challenge for businesses in Malaysia. Broadband with low-speeds and high-price is a barrier to the development and adoption of digital technology. Presently, Malaysia was ranked as the fifth after Singapore, Vietnam, Brunei and Myanmar in average 4G speeds in Southeast Asia (OpenSignal, 2018).

(Source: Future Trend in Transportation, 2017)

QUICK TAKEAWAYS AND HIGHLIGHTS

Technology convergence will revolutionise transportation - improving safety and mobility, and reducing cost and environmental impacts.

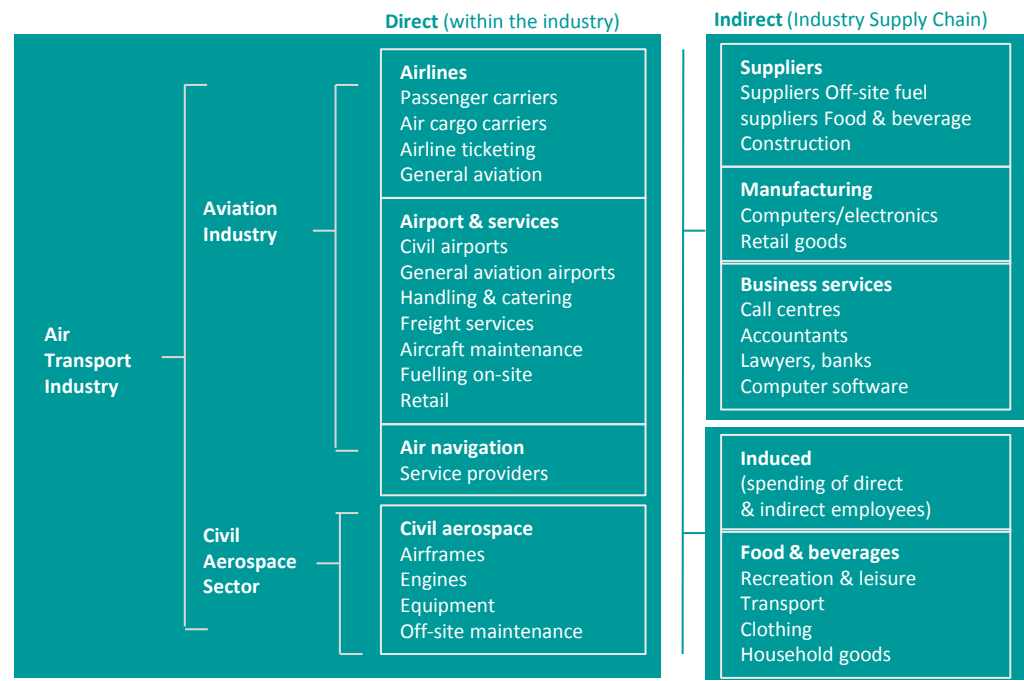
(Source: Future Trend in Transportation, 2017)

THE USE OF TECHNOLOGY IN AIR TRANSPORTION INDUSTRY

 ARTIFICIAL INTELLIGENCE	• KLM Royal Dutch Airlines is using the technology to complement the efforts of its social media service agents. Automated answers to straightforward questions can be provided by Artificial Intelligence (AI,) which frees up the human agents to deal with more complex enquiries. • Real-time predictive pricing, predictive aircraft maintenance and operational efficiency on the airfield, further highlighting its broad appeal to airlines.
 ROBOTICS	• Adopting robotics to engage with customers and optimise efficiency with examples such as Incheon Airport’s Airstar robot In Korea, Haneda Robotics Lab’s portfolio of robots in Japan, as well as Vistara’s ‘Rada’ robot, which in 2017 became the first robot to appear in an Indian Airport.
 AUGMENTED REALITY	• Gatwick Airport unveiled blue dot navigation and augmented reality way finding, which allows passengers to use the camera function on their device to view AR directions to wherever they need to go within the terminal. • Copenhagen Airport launched the first version of its own AR way finding tool and utilized it fully in 2011.
 INTERNET OF THINGS (IoT)	• Internet of Things (IoT) provides the industry with a constant stream of data which can be used with artificial intelligence to create valuable insights and expose new ways of working.
 CYBER SECURITY	• Airbus and SITA have launched new Security Operations Center Services customised for a specific needs of the air transport industry. The new incident detection services will provide airlines, airports and other air transport industry stakeholders with information about unusual cyber activity that may impact their businesses.

Source: 10 technology trends for airlines and airports to focus on (2018 and 2019) .

THE AIR TRANSPORT INDUSTRY AND ITS ECONOMIC IMPACTS



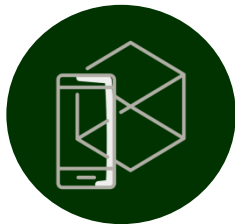
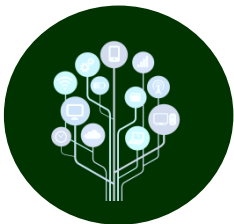
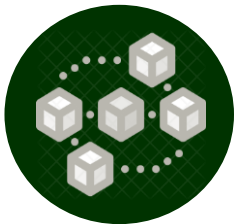
QUICK TAKEAWAYS
AND HIGHLIGHTS

Aviation provides the only worldwide transportation network, which makes it essential for global business and tourism. It plays a vital role in facilitating the economic growth, particularly in developing countries.

(Source: The Economic & Social Benefits Of Air Transport, Air Transport Action Group (ATAG) 2011).

(Source: The Economic & Social Benefits Of Air Transport, Air Transport Action Group (ATAG), 2011).

THE USE OF TECHNOLOGY IN FREIGHT FORWARDER INDUSTRY



BLOCKCHAIN TECHNOLOGY	INTERNET OF THINGS (IoT) ARTIFICIAL INTELLIGENCE	AUGMENTED REALITY
• Offering customers transparency, trust, plus time and money profit.	• Offering the use of containers with tracking devices that are connected in real-time. • Doing the follow up online, so that their customers are always informed about the location and conditions of their shipments.	• This technology will help to accept and clear new tasks and at the same time focus on how those changes interact with warehouse spaces and the back-end technologies.

(Source: 1. Land Or Sea: Digital Freight Forwarders Vs. Digital Shipping Lines, 2019
2. Delivering Digital Talent, 2018).

BENEFITS OF TECHNOLOGY IN FREIGHT FORWARDER INDUSTRY

	A REDUCED MARGIN OF ERROR • Automation helps reduce the margin of error in freight businesses. • Logistics softwares like Cargofive's are made to simplify rates and contracts management so that the sales processes can be optimized and errors can be avoided.
	MULTICHANNEL SALES • With online sales, it has been proved that the income is greater as there are more closed deals and, at the same time, it reduces costs. • More profitable to gain leads through inbound marketing and get them to buy than to sell the traditional cold way even for freight forwarders and logistics companies.
	DIFFERENTIATION AND ADDED VALUE • All businesses can develop features that add different values to their offers and set them apart from the rest.
	EFFICIENT CONNECTION WITH CUSTOMERS • Taking customers to the digital channel makes it easier to build stronger relationships with them, by being able to talk to many at the same time and offering them a custom treatment.
	TO BE AT THE FOREFRONT OF THE MARKET'S COMPETITION • Embrace new technologies to be able to position themselves at the forefront of the market's competition.

(Source: 6 Benefits of Digitalization in the Freight Industry, 2019).

QUICK TAKEAWAYS
AND HIGHLIGHTS

Overland freight in Malaysia is predominantly done via both large and small trucks, rails and a very small amount transported by pipeline. Trucking accounts for the vast majority of freight, with approximately 95% of all freight kilometres transported by truck.

(Source: Logistics and Trade Facilitation Masterplan, 2015).

Shipment of goods between East and West Malaysia is done predominantly via sea, or air for some high value, time critical deliveries, as there is no land bridge connects them.

(Source: Logistics and Trade Facilitation Masterplan, 2015).

The major overland freight corridor is north-south along the Thailand – Kuala Lumpur – Singapore axis on the western region of peninsular Malaysia.

(Source: Logistics and Trade Facilitation Masterplan, 2015).

Skilled Workers	Semi-skilled Workers	Low Skilled Worker
Comprises of Managers; Professionals; Technicians and Associate Professionals	Comprises of Clerical Support Workers; Service and Sales workers; Skilled Agricultural, Forestry and Fishery Workers; Craft and Related Trade Workers; Plant and Machine Operators and Assemblers.	Comprises of Elementary Occupations

(Source: MASCO 2013)

Technical Skilled	Non Technical Skilled
I. Involves high-end computer programmes and hands-on/ practical trainings. II. Practical and specific teachable or training programmes that can be defined and measured as required in a given context of task or activity.	I. Not related to or involving science or technology.

(Source: Standard Operating Procedure of Grant Unit)

Eleven (11) Pillars of Industry 4.0	Addictive Manufacturing Advancing with the use of new materials completely creating new possibilities.	Artificial Intelligence (AI) Technology that will supplement smart factory towards networked factory, in which data from supply chains, design teams, production lines and quality control are linked to form a highly integrated and intelligent engines.	Big Data Analytics Big data techniques are being applied in Manufacturing industries to improve customer experience and product quality, realise energy efficiencies, and conduct predictive maintenance.
	Advanced Materials New materials and nanostructures are being developed that allow the growth of beneficial material properties and allow massive customisations and development of products that were not possible until now.	Cyber Security Embed security functions into the IoT devices with sophisticated cybersecurity.	Simulation Simulate manufacturing processes using different production settings to find the optimal way to manufacture a product.
	Augmented Reality Some of the first applications can be found in the delivery of information and training. For instance, augmented reality can be used to deliver part replacement instructions to maintenance staff in the field.	Internet of Things (IoT) Technology embodies an unprecedented proliferation of sensors and connectedness among the sensors possibly to envisage the entire autonomous systems that revolutionise manufacturing.	Cloud Computing Leverage cloud based product design, simulation, artificial intelligence and big data solutions to improve production processes and build products better suited for customers.
		Autonomous Robots Machinery and robots can do more on its own and technology that allows systems to think, act and react autonomously help in contributing to a company's competitiveness, productivity and profitability.	System Integration Achieving end-to-end digital integration across the entire industry value chain.

(Source: Adopted from BCG, Lux Research, McKinsey & A.T. Kearney)

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It should be noted that this report has limitations as it does not cover all the employers within the selected industries. In the meantime, HRDF aspires to have continuous improvement in our industrial insights. Therefore, if you are an employer, we welcome your input by participating in our survey through the URL: <https://bit.ly/2GL0S9w>. Your input will be incorporated into our future publications of HRDF industrial insights. Thank you very much.

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Human Resources Development Fund (HRDF)

INDUSTRIAL INSIGHTS' REPORT SNAPSHOT

Issue: 3/2019

HRD LEVY UTILISATION IN 2018

53.9%



78.2%



Freight Forwarder

65.0%



Land Transport

CHALLENGES IN TRAINING



Time
constraint



Difficult to access training
which endorsed by
Regulatory/ Authority Bodies



Not able
to see
productivity

TOWARDS INDUSTRY 4.0



Cyber
security



Simulation



Internet of
Things (IoT)



System
Integration



Advanced
Materials

CRITICAL SKILLSETS



Process and
Operation



Safety &
Health



Journalist or Publishing
or Communication or
Media



Maintenance or
System and
Control



Quality &
Productivity

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For further inquiries please contact the Research and Development Department, HRDF at r&dgroup@hrdf.com.my