

Digital Talent Assessment for the Malaysian Tourism Industry: A Research Framework

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KEYWORDS	ABSTRACT
Digital Talent Digital Economy Talent Assessment	Digital talent is a USD 100 trillion industry but only one third of jobs requiring digital talent can be fulfilled. Organizations are often left with the dilemma on how to manage digital talent. Digital talent management influences the recruitment, training and development strategies of the organization. Malaysia has recognized the importance of digital talent as early as 2015 by outlining human capital development as one of the six cores in the 11 th Malaysian Plan. The Malaysian industrial sector accounts over a third of the country's GDP, and employs 36% of the labor force. This paper proposes a research framework for identifying digital talent skills in the Malaysian tourism industry. There are SIX (6) main phases in the study: <i>Preliminary Study</i> ; <i>Identification of Digital Talent Skills</i> ; <i>Data Collection</i> ; <i>Development of Digital Talent Model</i> ; <i>Development of Support Tool</i> ; and <i>Evaluation</i> . Expert reviews and questionnaires will be used as the research tools. Expected results include, but not limited to a list of digital talent skills, a new digital talent model, and a support tool for the Malaysian tourism industry.

1.0 Introduction

"Digital Talent" can be traced back to 2011 when the MIT Center for Digital Business and Capgemini Consulting undertook a three-year study on digital transformation programs [1]. Digital talent is a USD 100 trillion industry [2] but only one third of jobs requiring digital talent can be fulfilled [3]. Malaysia has recognized the importance of digital talent as early as 2015 by outlining human capital development as one of the six cores in the 11th Malaysian Plan [4]. The industrial sector in Malaysia accounts over a third of the country's GDP and employs 36% of the labor force. Although it is generally agreed that digital talent would provide competitive advantage in this era of digital economy, organizations are often left with the dilemma on how to manage digital talent [5], [6] affecting its restructuring, development, and recruiting strategies

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[7]. Digital talent is an issue for governments, researchers, and organizations alike [8]. This paper proposes a research framework for digital talent assessment for the Malaysian tourism industry.

2.0 Malaysian Industry

The Malaysian economy is the 4th largest in Southeast Asia and ranked 36th in the world. It has a high density of knowledge-based industries and adopts latest technology for manufacturing and digital economy. Malaysia is ranked the 27th most competitive economy in the world [9]. Malaysia's industry accounts for more than a third of its GDP and can be broadly categorized into two namely manufacturing and services sectors. In total, there are 25 industries in Malaysia as stipulated by the Ministry of International Trade and Industry (Table 1).

Table 1: List of Malaysian Industries

MANUFACTURING SECTOR	SERVICES SECTOR
1. Aerospace Industry	1. Legal
2. Automotive Industry	2. Accounting, Auditing, Bookkeeping & Taxation
3. Cement Industry	3. Architectural
4. Chemical and Petrochemical Industry	4. Engineering
5. Electrical and Electronics Industry	5. Communication
6. Food Industry	6. Construction & Related Engineering
7. Iron Steel Industry	7. Distribution
8. Machinery and Equipment Industry	8. Education
9. Medical Devices Industry	9. Environment
10. Pharmaceutical Industry	10. Health Related & Social Services
11. Rubber Industry	11. Tourism & Related Travel
12. Textile Apparel & Footwear Industry	12. Transport
13. Wood Based Industry	

Tourism is the third-largest contributor to Malaysia's GDP, after the manufacturing and commodities sectors. In 2019, tourism contributed approximately 15.9% to total GDP with 26.1 million visitors and RM 86.1 billion in revenue. The Malaysian tourism industry is divided into 11 categories based on the Ministry of Tourism, Arts and Culture Malaysia (MOTAC), listed in Table 2.

Table 2: Tourism Categories in Malaysia

1. Green Hotel
2. Licensed Travel Agency
3. Licensed Travel Agency (Umrah, Ziarah)
4. Licensed Tourist Guide
5. Malaysia Tourism Quality Assurance (MyTQA)
6. MM2H registered company.
7. Muslim-Friendly Accommodation Recognition (MFAR)
8. Rated Foot Massage Centre
9. Rated Hotel
10. Rated Spa Centre
11. Registered Hotel

In the last few years before the outbreak of COVID-19, tourism in Southeast Asia had experienced significant growth. Malaysia launched the “Visit Truly Asia Malaysia 2020” campaign with a target of 30 million visitors and RM100 billion in revenue by 2020. However, COVID-19 has severely impacted the industry, with only 4.33 million visitors and RM12.7 billion in revenue [11] recorded, leading to the cancellation of the campaign [10].

The Malaysian government then launched the National Tourism Policy (NTP) to ensure the continuity of the country’s tourism industry by making Malaysia a global tourist destination. Among the strategies outlined include ‘Smart Tourism’ [10]. Digital talent can play a pivotal role in Smart Tourism.

3.0 Digital Talent

The meaning of “digital talent” varies across organizations and industries [12]. Due to its varying meaning, there is yet set of specific “skills” associated with digital talent. It has been referred to as “a combination of hard digital skills and soft digital skills” [13]; “hard skills, soft skills and contextual skills” [14]; “digital skills, human skills and business skills” [5]; and “cross-cultural and inter-generational interaction skills” [15].

3.1 Digital Talent Assessment

Digital Talent assessment is a process to gauge the digital skills of talent. Assessments enable organizations to gain behavioral insights, tendencies and preferences of talents [16]. Common criteria for talent assessment include hard digital skills, soft digital skills, and digital roles within an organization [17].

3.2 Digital Talent System

Digital Talent System (DTS) can be defined as “a tool to identify, qualify and management talents”. Commercial DTS can be found across industries including financial, healthcare and manufacturing. Common DTS features include talent assessment, interview, reporting, and analytics. Most DTS have a combination of approaches and criteria to assess talents. Coupled with data analytics, organizations now have a better picture of the talent’s suitability in the organization.

4.0 Research Framework

There are SIX (6) main phases in this study: *Preliminary Study; Identification of Digital Talent Skills; Data Collection; Development of Digital Talent Model; Development of Support Tool; and Evaluation*, as illustrated in Figure 1.

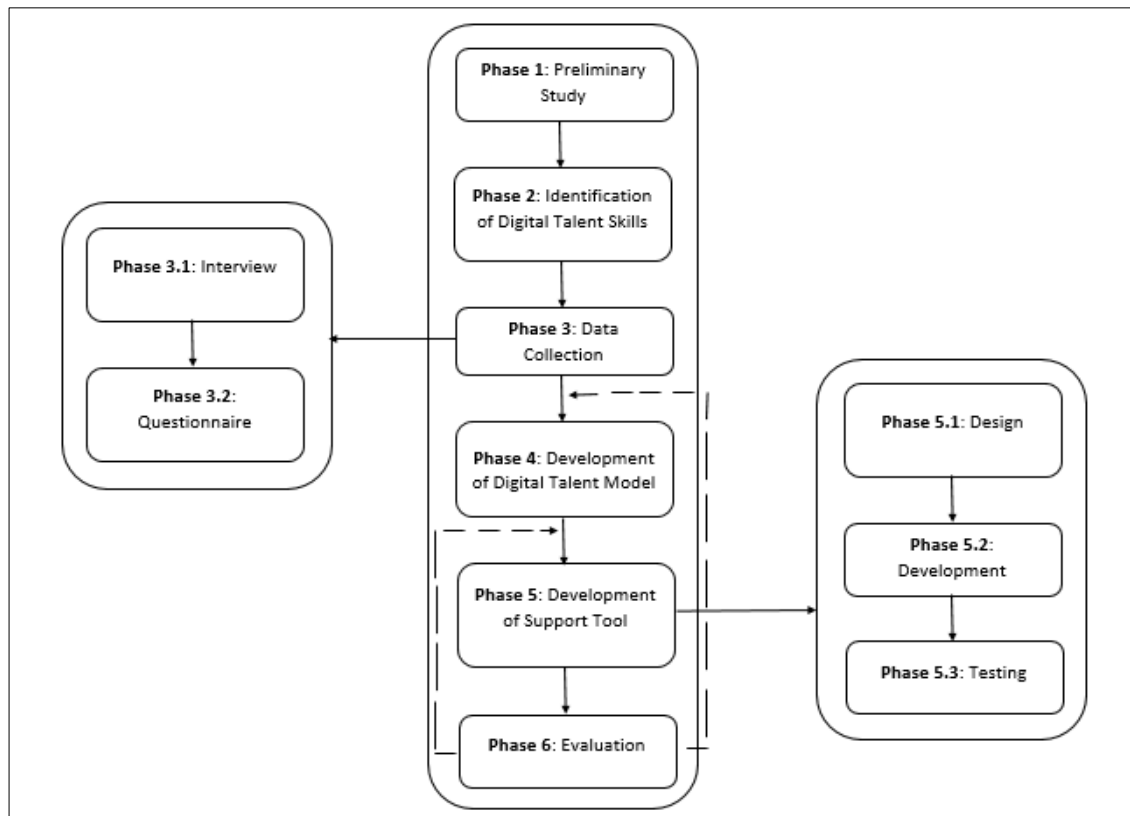


Figure 1: Research Framework

4.1 Preliminary Study

A quick literature search will be conducted to identify the status quo of digital talent systems and the Malaysian industry. This phase will take up THREE (3) months and results include a list of commercial digital talent management system based on industry; and a list of Malaysian industries and companies.

4.2 Identification of Digital Talent Skills

Next, a set of generic digital talent skills will be identified. An exhaustive search including journals, standards, reports, official websites and others will be carried out. This phase will take up FIVE (5) months of this study, resulting in a list of digital talent skills.

4.3 Data Collection

This phase is concerned with refining the list of skills with regards to the Malaysian tourism industry. Activities in this phase include:

- 4.3.1 Interview sessions with experts in the Malaysian tourism industry including the Chairman of the Tourism, Culture and Digital Technology Committee (Terengganu), the Director of Terengganu State Tourism Department, and MOTAC Branch Director (Terengganu).
- 4.3.2 Distribution of questionnaire to tourism companies registered with the Ministry of International Trade and Industry (MITI) and MOTAC. Sample size is set at 96, based on a population of 229,739 companies (December 2021 statistics), 95% confidence level and 10% confidence interval. List of candidate respondents is presented in Appendix A.

This phase will take up FIVE (5) months of this study, resulting in a list of digital talent skills for the Malaysian tourism industry.

4.4 Development of Digital Talent Model for Tourism Industry

A new digital talent model will be developed in this phase. This model will be based on a strong theoretical foundation (results of Phase 2) and industrial best practice (results of Phase 3). This phase will take up THREE (3) months, resulting in a digital talent model for the Malaysian tourism industry.

4.5 Development of Support Tool

A computer support tool will be designed and developed in this phase. The objective is to support digital talent assessment by organizations in the tourism industry. A traditional waterfall model for system development will be adopted comprising of requirements analysis, design, implementation and testing. List of tools that will be utilized include *MIT App Inventor 2*, *MIT AI2 Companion*, *Google Spreadsheet* and *Google Script*. This phase will take up SIX (6) months, resulting in an App to support digital talent assessment.

4.6 Evaluation

Finally, the proposed model and support tool will be validated by means of expert reviews. Selected tourism companies will be given access to the support tool for a duration of TWO (2) months. At the end of this period, a short questionnaire and interview session will be administered to confirm the feasibility and practicality of the model and support tool. Feedback and comments will be analyzed and refinements to the model and/or tool will be carried out (if needed). This phase will take up FOUR (4) months, resulting in a refined digital talent model and support tool. List of all phases and deliverables are illustrated in Figure 2.

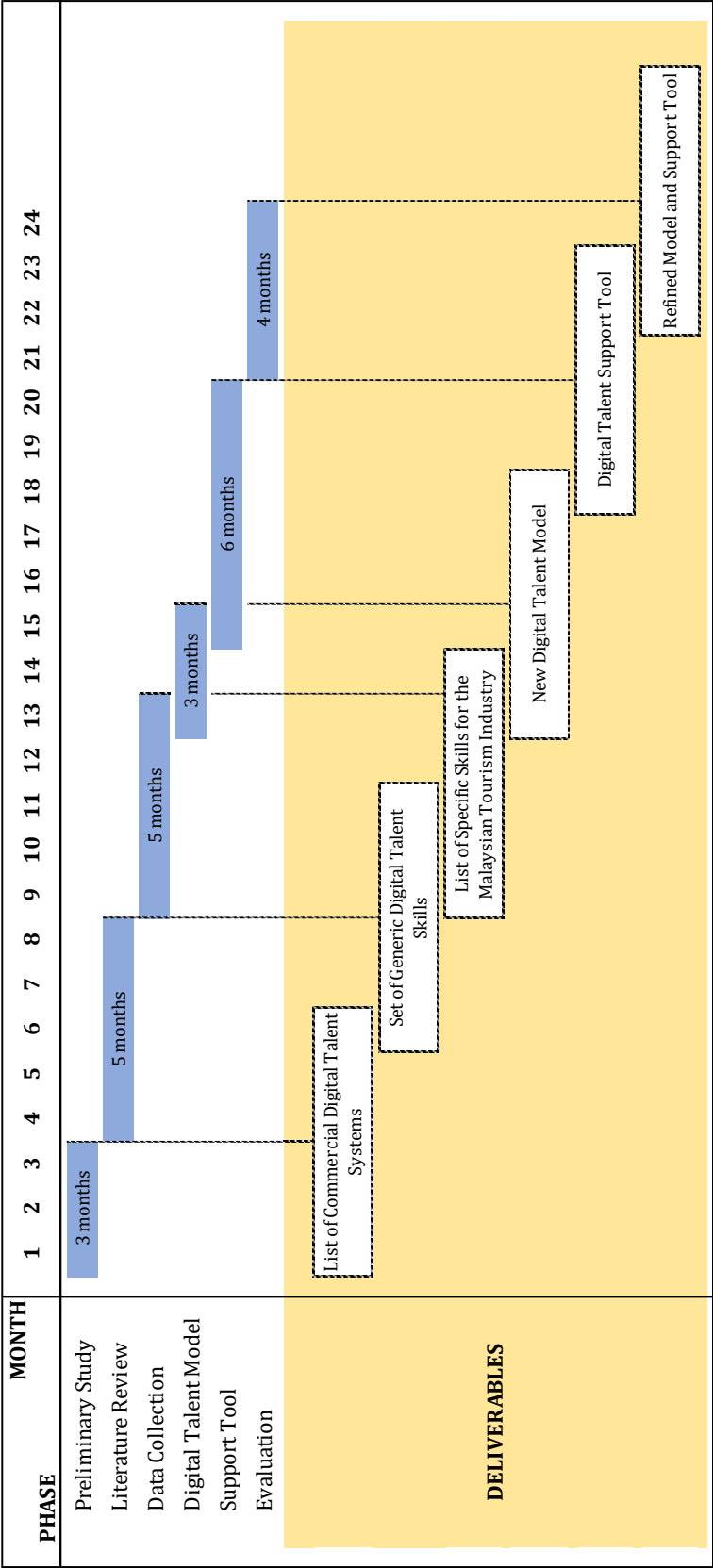


Figure 2: Research Timeline

5.0 Conclusion

This paper has presented a research framework for identifying digital talent skills in the Malaysian tourism industry. There are SIX (6) main phases in the framework: *Preliminary Study*; *Identification of Digital Talent Skills*; *Data Collection*; *Development of Digital Talent Model*; *Development of Support Tool*; and *Evaluation*. Expert reviews and questionnaires will be used as the research tool. Expected results include, but not limited to a list of digital talent skills, a new digital talent model, and a computer support tool for the Malaysian tourism industry.

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Appendix A: List of Candidate Respondents Based on MOTAC Category

NO	COMPANY	STATE	CATEGORY
1.	101 Resort Janda Baik	Pahang	Registered Hotel
2.	Adya Hotel Langkawi	Kedah	Muslim-Friendly Accommodation Recognition (MFAR): Muslim-Friendly Hotel (Platinum)
3.	Air Keroh D'village	Melaka	Registered Hotel
4.	Al Haramain Global Tours & Services Sdn. Bhd.	Perak	Registered Travel Agency (Umrah, Pilgrimage)
5.	Al Muneer Travel & Tours Sdn. Bhd.	Pahang	Registered Travel Agency (Umrah, Pilgrimage)
6.	Alam Travel & Tours Sdn. Bhd.	Terengganu	Registered Travel Agency
7.	Alter Domus (MM2H) Sdn Bhd	Pulau Pinang	MM2H Registered Company
8.	Alun Alun Spa	Kedah	Rated Spa Centre
9.	Anggun Ayu Spa	Melaka	Rated Spa Centre
10.	Aramaz Borneo (MM2H) Sdn Bhd	Sarawak	MM2H Registered Company
11.	Attiq Travel & Tours Sdn. Bhd.	Johor	Registered Travel Agency
12.	Aura Malay Spa	Terengganu	Rated Spa Centre
13.	Baan Sabai Sonia Day Spa	Perak	Rated Spa Centre
14.	Bali Traditional Reflexology	WP KL	Rated Foot Massage Centre
15.	Bamboostick Ice Cream (M) Sdn Bhd	Johor	Muslim-Friendly Accommodation Recognition (MFAR): Original Equipment Manufacturing (OEM) Halal Product
16.	Bella Vista Express	Kedah	Registered Hotel
17.	Berjaya Penang Hotel	Pulau Pinang	Rated Hotel
18.	Bestour & Travel (M) Sdn.Bhd	WP KL	Registered Travel Agency
19.	Bintang Rajin (MM2H) Sdn. Bhd	Pahang	MM2H Registered Company
20.	Bioplus Healthcare Sdn Bhd	Pulau Pinang	Muslim-Friendly Accommodation Recognition (MFAR): Halal Pharmaceutical Products
21.	Body N Soul Relaxations	Melaka	Rated Foot Massage Centre
22.	Borneo Divers Mabul Resort	Sabah	Registered Hotel
23.	Cahaya Kalbu Travel & Tours Sdn. Bhd.	Kelantan	Registered Travel Agency (Umrah, Pilgrimage)
24.	Camar Resort Langkawi	Kedah	Rated Hotel
25.	Casa Refleksologi	Pahang	Rated Foot Massage Centre
26.	Cat City Holidays Sdn. Bhd	Sarawak	Registered Travel Agency
27.	Coral Redang Island Resort	Terengganu	Rated Hotel
28.	D Sense Health & Beauty	Pulau Pinang	Rated Spa Centre
29.	Damai Puri Resort & Spa	Sarawak	Registered Hotel
30.	Dayang Biru Travel Corp Sdn.Bhd	Kedah	Registered Travel Agency
31.	Diwani Kraf	Selangor	Muslim-Friendly Accommodation Recognition (MFAR): Souvenirs
32.	D'wharf Hotel Serviced & Residence Port Dickson	Negeri Sembilan	Rated Hotel
33.	Eden Reflexology Centre	Sabah	Rated Foot Massage Centre
34.	Eltair Holidays Sdn. Bhd.	Kedah	Registered Travel Agency (Umrah, Pilgrimage)
35.	Energy Spa & Wellness	WP KL	Rated Spa Centre
36.	Enrich Wellness & Spa	Selangor	Rated Spa Centre
37.	Genting Highlands Premium Outlets	Pahang	Malaysia Tourism Quality Assurance (MyTQA)
38.	GfHomeland Consultants (Mm2h) Sdn Bhd	Selangor	MM2H Registered Company
39.	Goodmaid Chemicals Corp. Sdn Bhd	Negeri Sembilan	Muslim-Friendly Accommodation Recognition (MFAR): Halal Consumer Goods
40.	Grand Darul Makmur Hotel	Pahang	Muslim-Friendly Accommodation Recognition (MFAR): Muslim-Friendly Hotel (Gold)
41.	Grand Puteri Hotel	Terengganu	Registered Hotel
42.	Great Pyramid Migration Services (MM2H) Sdn. Bhd.	WP Kuala Lumpur	MM2H Registered Company
43.	Guaterra Travel Sdn. Bhd.	Perak	Registered Travel Agency
44.	Harolds Bread (Factory) Sdn Bhd	Perak	Muslim-Friendly Accommodation Recognition (MFAR): Halal Food/Beverage Products
45.	Hda Poultry Sdn. Bhd.	Terengganu	Muslim-Friendly Accommodation Recognition (MFAR): Halal Slaughterhouse
46.	Hexagon Highs Transport Sdn Bhd	Sarawak	Muslim-Friendly Accommodation Recognition (MFAR): Logistic (Halal)
47.	Hibiscus New Lifestyle (MM2H)	Perak	MM2H Registered Company
48.	Hotel Jen Penang By Shangri-La	Pulau Pinang	Rated Green Hotel
49.	Hotel Maluri	WP KL	Rated Hotel
50.	Hotel Perdana Kota Bharu	Kelantan	Registered Hotel

51.	Hyatt Regency Kinabalu	Sabah	Muslim-Friendly Accommodation Recognition (MFAR): Muslim-Friendly Hotel (Silver)
52.	Imperial Thai Foot Massage Centre	Pulau Pinang	Rated Foot Massage Centre
53.	Jari Jari Spa	Sabah	Rated Spa Centre
54.	Kembara Sufi Travel & Tours Sdn. Bhd.	Selangor	Registered Travel Agency (Umrah, Pilgrimage)
55.	Koisaan Culture Village	Sabah	Malaysia Tourism Quality Assurance (MyTQA)
56.	L&J Foot Reflexology And Health Treatment Centre	Terengganu	Rated Foot Massage Centre
57.	Lido Café (Hotel Aifa Sdn.Bhd)	WP Labuan	Muslim-Friendly Accommodation Recognition (MFAR): Halal Food Premise
58.	Limsa Jaya (MM2H) Sdn. Bhd.	Kedah	MM2H Registered Company
59.	M.Maha-Izah Transport & Tours Sdn. Bhd.	Pulau Pinang	Registered Travel Agency
60.	Mahkota Hotel Melaka	Melaka	Rated Hotel
61.	Mamee Jonker House Sdn Bhd	Melaka	Muslim-Friendly Accommodation Recognition (MFAR): Halal Food Premise
62.	Mandarin Oriental Hotel	WP KL	Rated Green Hotel
63.	Menara Taming Sari	Melaka	Malaysia Tourism Quality Assurance (MyTQA)
64.	Mountain Tour & Travel Sdn. Bhd.	Pahang	Registered Travel Agency
65.	Muzium Kesenian Islam	WP KL	Malaysia Tourism Quality Assurance (MyTQA)
66.	My Living Hope (MM2H) Sdn. Bhd	Sabah	MM2H Registered Company
67.	Nawwarah Travel & Tours Sdn. Bhd.	Negeri Sembilan	Registered Travel Agency (Umrah, Pilgrimage)
68.	Noor Arfa Craft Complex	Terengganu	Malaysia Tourism Quality Assurance (MyTQA)
69.	Nur Multazam Travel & Services Sdn. Bhd.	Sabah	Registered Travel Agency (Umrah, Pilgrimage)
70.	Palm Café (Resort Villa Golf Course Development Sdn Bhd (Palm Garden Hotel))	WP Putrajaya	Muslim-Friendly Accommodation Recognition (MFAR): Hotel & Resort (Halal Food Premise)
71.	Paya Beach Spa & Dive Resort	Pahang	Rated Hotel
72.	Pullman Kuching	Sarawak	Rated Hotel
73.	Pulse Grande Hotel Putrajaya	WP Putrajaya	Registered Hotel
74.	Pusat Rawatan Fizikal Tradisional Vitamidas Sejati Sdn Bhd	Kedah	Rated Foot Massage Centre
75.	Pusat Rawatan Kesihatan Urut Refleksologi@Twin Star Hotel	Perak	Rated Foot Massage Centre
76.	Qasswa Travel & Tours (M) Sdn Bhd	Johor	Registered Travel Agency (Umrah, Pilgrimage)
77.	Raudhah Jaya Travel & Tours Sdn. Bhd.	Terengganu	Registered Travel Agency (Umrah, Pilgrimage)
78.	Safar Al Ghazali Travel & Tours Sdn Bhd	Sarawak	Registered Travel Agency (Umrah, Pilgrimage)
79.	San Spa	Pahang	Rated Spa Centre
80.	Segar City Theme Park	Negeri Sembilan	Malaysia Tourism Quality Assurance (MyTQA)
81.	Semenggoh Wildlife Centre	Sarawak	Malaysia Tourism Quality Assurance (MyTQA)
82.	Shangri-La Rasa Sayang Resort & Spa	Pulau Pinang	Rated Green Hotel
83.	Shizen Health Care Centre	Negeri Sembilan	Rated Foot Massage Centre
84.	Signature Healthland	Selangor	Rated Foot Massage Centre
85.	Skyscape @ Menara Jland	Johor	Malaysia Tourism Quality Assurance (MyTQA)
86.	Sobella Beauty Sdn. Bhd.	Kelantan	Muslim-Friendly Accommodation Recognition (MFAR): Halal Cosmetics/Grooming Products
87.	Sri Batik Times Inn Motel	Pulau Pinang	Registered Hotel
88.	Sri Tasek Travel & Tours Sdn Bhd	WP Labuan	Registered Travel Agency
89.	Subang Valley Hotel	Selangor	Registered Hotel
90.	Sunway Lost World Hotel	Perak	Rated Hotel
91.	Taman Botani Putrajaya	WP Putrajaya	Malaysia Tourism Quality Assurance (MyTQA)
92.	The Datai Langkawi	Kedah	Rated Green Hotel
93.	The Habitat Penang Hill	Pulau Pinang	Malaysia Tourism Quality Assurance (MyTQA)
94.	The Magellan Sutra Resort Kota Kinabalu	Sabah	Rated Hotel
95.	The Zenith Hotel	Pahang	Rated Green Hotel
96.	Tranquility Spa & Wellness Sdn Bhd	WP Putrajaya	Rated Spa Centre
97.	Uzbekistan Airways	WP KL	Muslim-Friendly Accommodation Recognition (MFAR): Muslim-Friendly Airline
98.	Vantage Abt (MM2H) Sdn.Bhd	Johor	MM2H Registered Company
99.	Villas (MM2H) Sdn Bhd	Melaka	MM2H Registered Company
100.	Zuzin Holidays Sdn Bhd	Melaka	Registered Travel Agency