

National Business Digital Adoption Index

2022



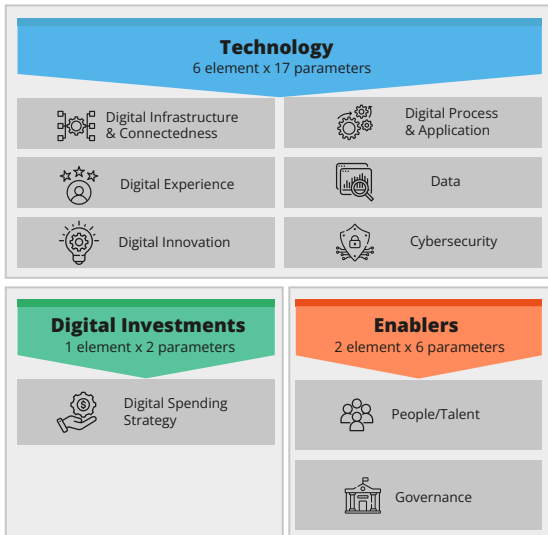


Business Digital Adoption Index (BDAI)

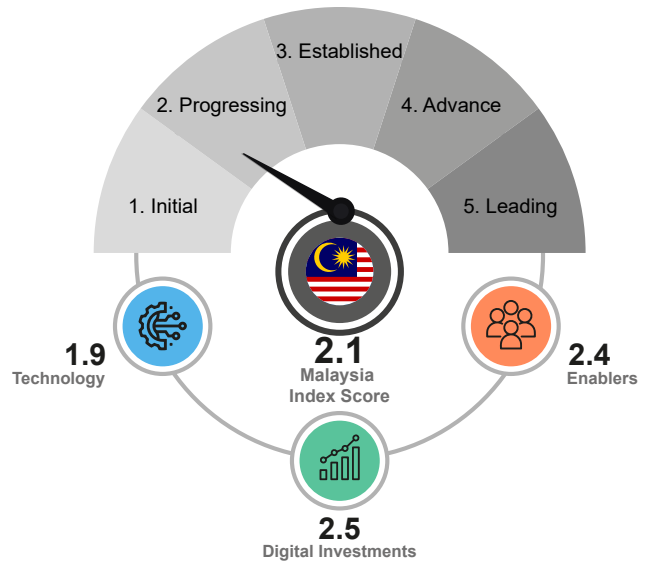
What is BDAI?

A national baseline index to measure digital adoption for businesses in Malaysia.

BDAI Framework



Business Digital Adoption

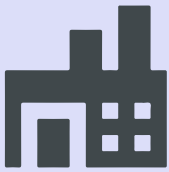


Malaysia's overall index score of 2.1 indicates that digital adoption is "Progressing" across businesses in the country. Technology is an area to be addressed.

Most companies are expanding the usage and digital investments in more web-based technologies, digital platforms and digital solutions.

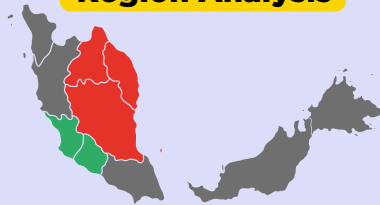
Progressive efforts to improve capabilities of digital talents and to promote digital culture in businesses.

Industry Analysis



- Manufacturing and services industries are more matured digitally compared to high reliance and usage of digital tools, processes and data.

Region Analysis



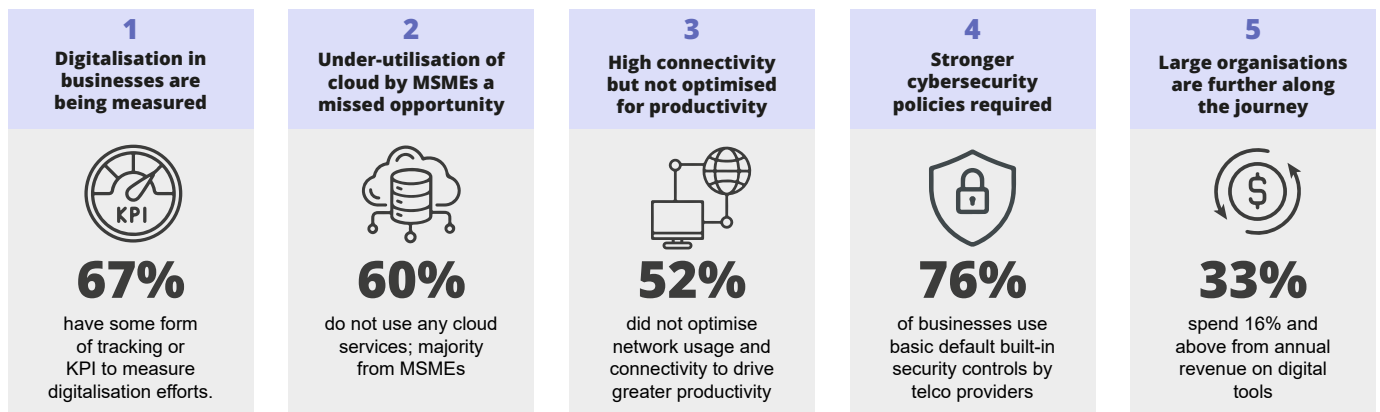
- Businesses in central region have an advantage as compared to other regions, particularly in their usage of business applications and modernised processes.
- Businesses in East Coast region lags in digital adoption due to lack of people and talent.

Company Size Analysis



- Large companies are most mature digitally as compared to micro, small-and-medium sized enterprises (MSMEs).

What We Have Learnt



Source: Pilot BDAI Survey, 2022, MDEC

What Gets Measured, Gets Done

The Case for a **Business Digital Adoption Index (BDAI)**

Post-Covid 19, there certainly is a sense of urgency amongst local businesses to embrace or adopt digital solutions. In 2022, a survey found that 94% of companies in Malaysia plans to accelerate the adoption of technology in their businesses over the next 12 months. This will be done by increasing technology training for employees, increasing investments or upgrading technology and implementing a digital transformation strategy (source: CPA Australia Business Technology Survey, 2022).

Digitalisation is pervasive, consistently evolving and generally varied across companies in different fields, business domain and perhaps even location. There is a need to identify segments of the businesses that have adopted emerging digital technologies such as Cloud, Artificial Intelligence (AI), and the like to promote digital convergence for better efficiency and productivity.

In 2016, a global World Bank study on Digital Adoption Index highlighted that Malaysia was generally competitive in the sub-indexes of Governance and People. However, there remains areas that could be improved in the Business sub-index. According to the Department of Statistics of Malaysia (DOSM), there are about 1.3 million registered businesses in 2021, whereby 97.4% of these are micro, small and medium enterprises (MSMEs).

The Government of Malaysia is cognizant of the benefits and impact of digitalisation in the business segment as it has the potential to contribute significantly to the economy, jobs and innovation. With this in mind, the Government through the Malaysia Digital Economy Corporation (MDEC) embarked on an initiative in 2022 to develop the country's first ever Business Digital Adoption Index (BDAI). The effort was a close collaboration between DOSM, the Ministry of Economy and the Ministry of Communications and Digital.

Several stakeholder engagement sessions with the public and private sector resulted in the establishment of a robust BDAI framework. The intent was to develop and establish an instrument and framework that would provide an indicative measurement on digital adoption for businesses across the country covering all sizes of enterprises in all economic sectors.

A well-established BDAI would be immensely useful to support the growth of our digital economy. For example, policy-makers and relevant stakeholders would be able to identify which industry needs more assistance in digitalisation; or perhaps determine the current digital competitiveness of each state; or even to identify the focus of the Federal budget allocation in the nation's digital agenda. Whereas, the private sector including industry and trade associations can assess the digital readiness of their respective areas to further drive the digital adoption agenda.



The BDAI Framework

The BDAI framework was developed based on three (3) Categories, nine (9) Elements and 25 Parameters.

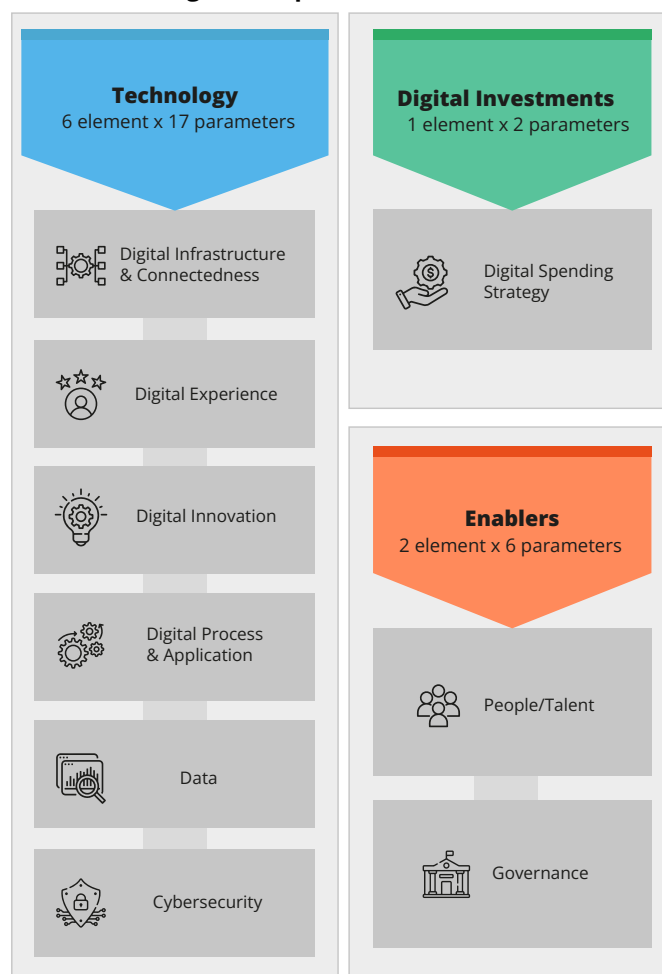
The 3 categories are Technology, Digital Investments and Enablers. There are six (6) Elements under Technology, namely Digital Infrastructure & Connectedness, Digital Experience, Digital Innovation, Digital Process & Application, Data and Cybersecurity. Under Digital Investment, there is only one (1) Element, ie. Digital Spending Strategy and for the Enablers, there are two (2) Elements, ie. People/Talent and Governance.

25 parameters were then structured within each of the elements to come up with the survey questionnaire. Some examples of these parameters include 'access to infrastructure', 'scale of connectedness', 'technology spending strategy' and 'level of automated process'.

Finally, the questionnaire, which consisted of 47 questions, was rolled out as a pilot nationwide survey to 1,000 companies to further strengthen the structure of the BDAI framework and establish the baseline index score.

The scores obtained from the survey were analysed and visualised in the form of heatmaps of the three Categories of Technology, Digital Investments and Enablers.

Business Digital Adoption Index (BDAl) Framework



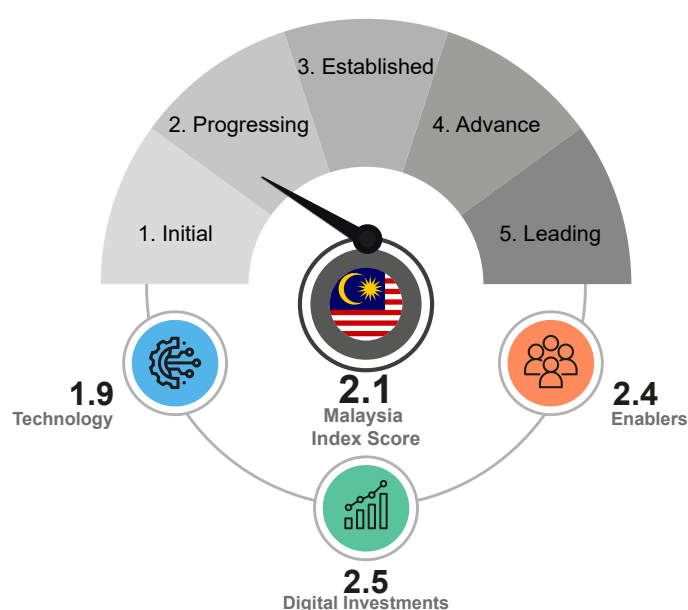
BDAl Pilot Baseline Score and Heatmap Analysis

Overall, Malaysia recorded a Business Digital Adoption Index score of 2.1 (out of 5).

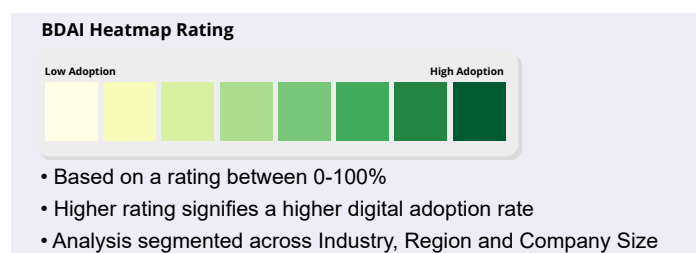
According to the proposed definitions of the scale, this index positions Malaysia at slightly above 'Progressing', indicating that digital adoption is progressing across businesses in Malaysia to a certain extent.

In addition, most companies are expanding the usage, scale of usage and digital investments in more web-based technologies, digital platforms and digital solutions in their line of business.

There is also more awareness from companies to promote digital culture and make progressive efforts to improve capabilities of digital talents.



The overall heatmap analysis reveals that Malaysia scored fairly even in Digital Investments and Enablers at indices of 2.5 and 2.4 respectively. However, Technology had the lowest index score of 1.9, indicating it as an area of focus to be addressed.



		BDAI Components		
		Digital Investments	Enablers	Technology
REGION	Central			
	East Coast			
	East Malaysia			
	North			
	South			
COMPANY SIZE	Large			
	Medium			
	Micro			
	Small			
INDUSTRY VERTICAL	Agriculture			
	Construction			
	Manufacturing			
	Mining & Quarrying			
	Services			
Grand Total		2.5	2.4	1.9

The detailed analysis below, which is segmented by the respective elements, would offer more valuable insights by Industry, Region and Company Size.

Industry Analysis

It was observed that the Manufacturing and Services industries are marginally more mature although there were no clear distinctions between other industries. A possible explanation is that the Manufacturing and Services sectors have adopted digital technologies at a faster rate because of the high reliance and usage of digital tools, processes and data due to their nature of operations and the increasing use of automation platforms. In addition, the availability of skilled labour and technological infrastructure could have also helped to increase these adoption rates. At the end of the spectrum is the Agriculture sector, which currently still lags behind the others in terms of digital adoption.

Industry Verticals	Technology						Digital Investments	Enablers		Total
	Digital Infrastructure & Connectedness	Digital Process & Application	Digital Experience	Data	Digital Innovation	Cybersecurity	Digital Investment Strategy	People/ Talent	Governance	
Agriculture										2.10
Construction										2.17
Manufacturing										2.26
Mining & Quarrying										2.17
Services										2.29
Total	2.54	2.21	1.65	2.11	1.66	1.86	2.64	2.37	2.61	

Source: Pilot BDAI Survey, 2022, MDEC

Region Analysis

Across all five regions in Malaysia, companies surveyed were well connected and have access to diverse infrastructure. However, it was observed that companies who run their businesses in the Central region have a slight edge over companies in other regions, particularly in their usage of business applications and modernised processes. It was also encouraging to see companies in the East Malaysia region having a fairly good digital adoption levels, scoring just below the Central region. Another key finding is that companies in the East Coast currently lag in digital adoption when it comes to the people and talent element.

Region	Technology						Digital Investments	Enablers		Total
	Digital Infrastructure & Connectedness	Digital Process & Application	Digital Experience	Data	Digital Innovation	Cybersecurity	Digital Investment Strategy	People/ Talent	Governance	
Central										2.15
East Coast										2.05
East Malaysia										2.14
North										2.08
South										2.11
Total	2.45	2.14	1.57	2.09	1.59	1.82	2.52	2.30	2.38	

Source: Pilot BDAI Survey, 2022, MDEC

Company Size Analysis

The differences of digital adoption by the size of companies are quite apparent. For example, large companies were found to be most mature digitally, when compared to micro, small-and-medium enterprises (MSMEs). Perhaps more focus then should be placed on supporting the MSMEs. Generally, SMEs had mixed scores across various key elements, but generally they have some areas to improve in their digitalisation efforts. In comparison, micro enterprises are currently lagging in digital adoption, which may impact their long term competitiveness and resilience.

Company Size	Technology						Digital Investments	Enablers		Total
	Digital Infrastructure & Connectedness	Digital Process & Application	Digital Experience	Data	Digital Innovation	Cybersecurity	Digital Investment Strategy	People/Talent	Governance	
Large										3.09
Medium										2.21
Small										1.86
Micro										1.26
Total	2.45	2.12	1.57	2.11	1.59	1.80	2.49	2.31	2.39	

Source: Pilot BDAI Survey, 2022, MDEC

Key Takeaways from Pilot BDAI Survey, 2022

1. Companies adopt digital devices and ICT infrastructure, but lag in cloud adoption

Despite widespread and increasing growth in access to digital devices and ICT infrastructure, many Malaysian businesses have yet to fully embrace cloud-based solutions and are utilising their digital infrastructure in a limited way. At present, 60% of businesses do not use any cloud services, with the majority being MSMEs. For example, the survey found that 97% of micro businesses and 81% of small companies are not utilising cloud-based solutions, which would have offered greater flexibility, scalability, collaborations, security and cost savings for their business. This highlights the underutilisation of cloud and a missed opportunity for many companies. It was also observed that the Southern region has the lowest adoption of cloud.



Digital Devices

- ◆ **79%** of employers providing 1 or 2 devices to employees for work purpose.
- ◆ Micro and small businesses most likely utilise desktop and smartphones compared to laptops which are more popular with large businesses.



IT Infrastructure

- ◆ **59%** of companies implement basic IT infrastructure.
- ◆ **72%** of micro businesses just rely on basic devices.
- ◆ Central and Southern companies deployed more advanced IT infrastructure.



Cloud Usage

- ◆ **97%** of micro businesses and **81%** of small companies are not utilising cloud-based solutions for their business.
- ◆ Southern region has the lowest adoption of cloud.



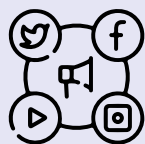
Connectivity

- ◆ **68%** of micro companies subscribe to fixed & mobile broadband, and mostly for online web search and communication.
- ◆ Lower adoption of enterprise connectivity by companies in East Coast and East Malaysia region.

2. Malaysian businesses embrace social media to boost operations

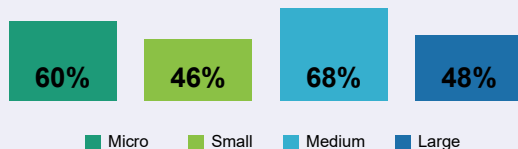
The majority of businesses in Malaysia are already leveraging on some form of social media and automation strategies as part of their business operations to boost efficiency. For example, 55% of businesses are currently using social media platforms like WhatsApp, Facebook, and Instagram for their business operations. 81% of companies surveyed also used at least some form of automation in their current business operations.

Social Media

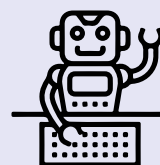


55% of businesses use social media platforms for their business operations

Social Media for Business Process by Business Size

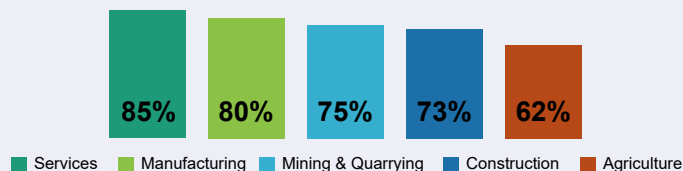


Automation



81% businesses use some form of automation in their business operations

Industries with Automation



3. Social media is emerging as a critical CX tool for businesses

Businesses are starting to use digital platforms to enhance and improve Customer Experience (CX) to reach their customers but are still slow to adopt digital tools for intra-company collaboration and productivity. Currently, 56% of companies already use basic digital tools like emails and telephones to engage with their customers. In addition, 31% of companies use social media to the same effect, with the most popular platforms used for customer engagements being WhatsApp, Facebook, and Google.

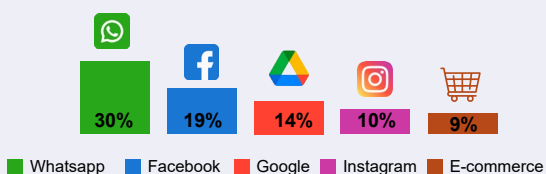
Customer Interactions



56% businesses use basic digital tools such as email and telephone to engage with our customers.

31% of businesses use social media.

Most used social platform for customer engagement

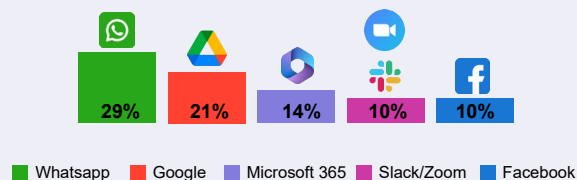


Collaboration Tools



15% work or collaborate using tools such as Google Suite, Slack, Microsoft 365, Slack, Zoom and Facebook as part of their business operations.

Most used social platform for collaboration



4. Large companies leverage data for growth, small businesses lag behind

The survey found that 64% of companies did not adopt any emerging technologies. Many of these companies are hesitant to adopt emerging technologies due to lack of knowledge and high risk. However, the silver lining here is that there is a growing interest in the Internet of Things (IoT), where adoption is the highest across all regions and company size. It was also found that the services and manufacturing sectors are the highest adopters. Currently 60% of companies utilise data to improve customer interactions, although it was also observed that 62% of micro and 32% of small companies did not collect data. Northern companies were also observed to have the lowest data usage. Generally, there still exists a significant gap between MSMEs and large enterprises on its approaches to adopting emerging technologies like Cloud and AI. For example, in the area of data collection and analytics, large enterprises utilise more sophisticated software to generate business insights compared to smaller ones.

Usage of Data

- ◆ **60%** of organisations utilise data for customer interaction.
- ◆ **62%** of micro and **32%** of small companies did not collect data.



Data Collection & Analytics

- ◆ **60%** of organisations use spreadsheet to collect data.



Use of Emerging Tech

- ◆ **64%** of organisations did not adopt any emerging technologies.



Approach on emerging tech

- ◆ **61%** of organisations are hesitant to adopt emerging technologies.



5. Majority of organisations implement a basic cybersecurity strategy

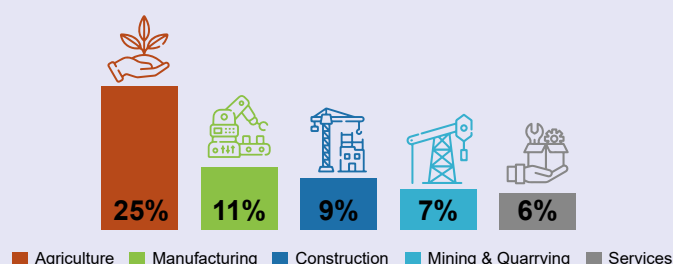
Currently there is still very low adoption of security controls in businesses across Malaysia. Some of the critical reasons for this is the high cost of security solutions, difficulty in calculating return on investment, and the lack of risk awareness amongst companies. Although 51% of companies in Malaysia surveyed mentioned that they have implemented a basic security policy to protect their businesses against common cybersecurity attacks, it was observed that 9% of companies do not have any security solutions in place, with the majority being micro enterprises. It was also observed that Agriculture, Manufacturing and Construction are the top three sectors with companies without any security solutions.

Cybersecurity Strategy



51% of businesses in all Malaysia implement a basic security policy.

The 9% without security solutions by industries

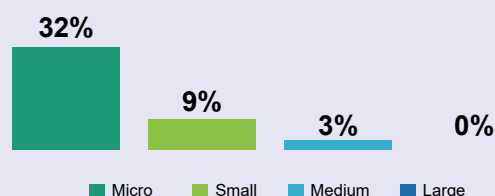


Default Security Control



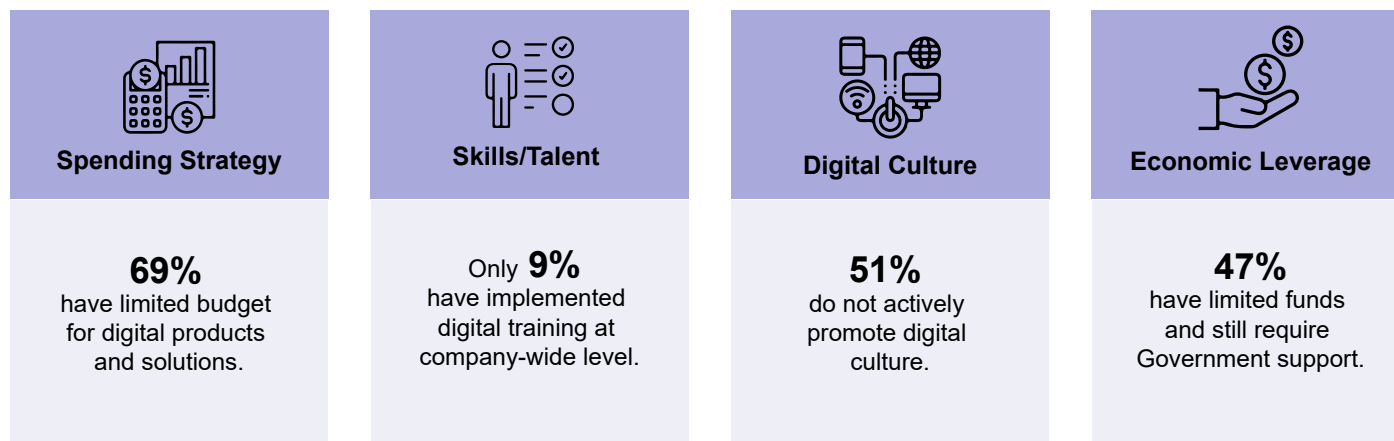
76% of Malaysian businesses utilise default built-in security controls by the telco providers.

The 9% without security solutions by business size



6. Limited spending on digital solutions despite motivation and drive to digitalise

Cost constraints, lack of skills, and a lack of digital culture remain as critical barriers to digital adoption among businesses in Malaysia. For example, 51% of businesses do not actively promote digital culture within the organisation. It was also discovered that 69% of companies reported that they have an allocation of only between 1-5% of total annual revenue to spend on digital products and solutions. In addition, although 64% of companies provide training programmes to employees to acquire digital skills, only 9% of companies managed to implement it at an organisation-wide level. The survey also discovered that 68% of companies currently rely on Government incentives to adopt digitalisation, with many citing limited funds as the main reason.



Conclusion

Malaysia offers many opportunities for digital growth and innovation through various initiatives and efforts by the Government and the private sector to build a vibrant digital ecosystem in the country. The national Business Digital Adoption Index provides insights on key areas of focus in order to drive wider and more effective digital adoption by businesses. With the successful development of the BDAI framework and the implementation of the pilot survey, MDEC will proceed to establish a national BDAI baseline score that would cover all states in Malaysia. The national BDAI aspires to provide essential data to strengthen the effectiveness of public and private sector-led business digital adoption efforts.

