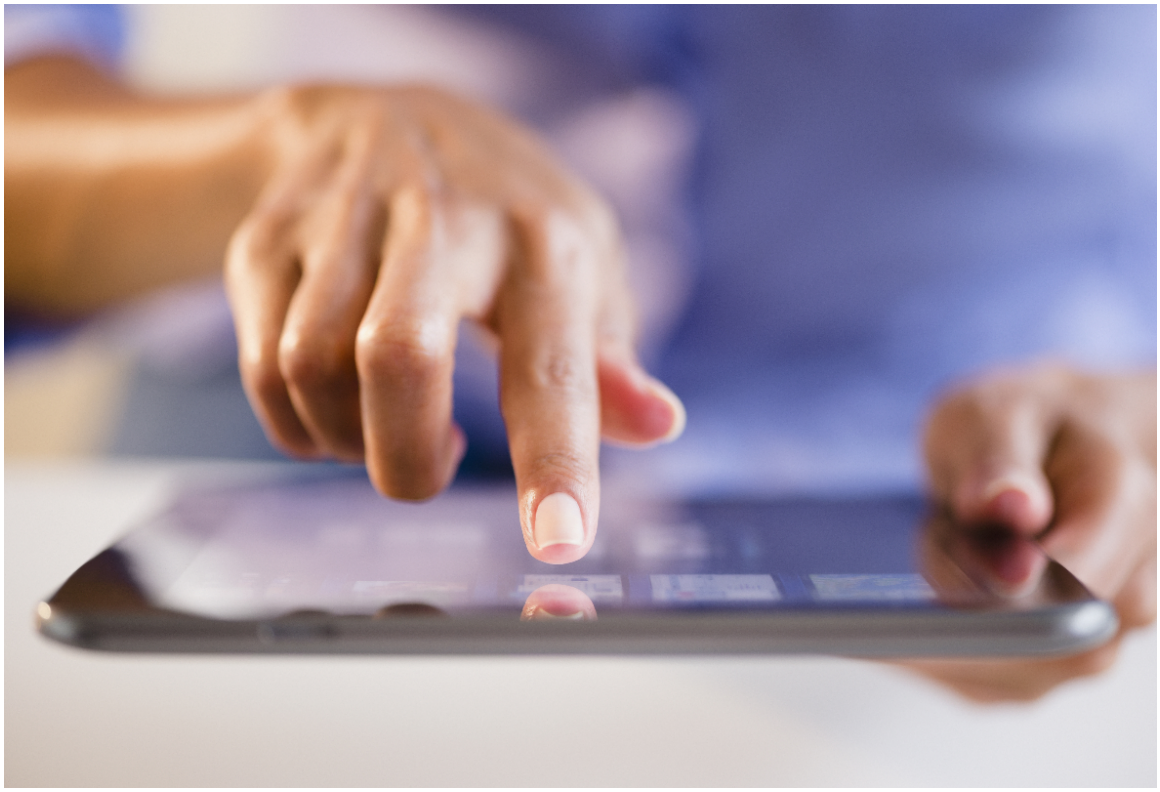
USAID
FROM THE AMERICAN PEOPLE



PARTNERSHIP FOR ACCELERATING RESULTS IN TRADE, NATIONAL EXPENDITURE, AND REVENUE (PARTNER) ACTIVITY

ASSESSING THE DIGITAL MATURITY OF SMALL- AND MEDIUM-SIZED EXPORTERS IN SRI LANKA

JULY 2022

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

AC	Advisory Committee
AI	Artificial Intelligence
BOC	Bank of Ceylon
BPM	Business Process Management
CAPI	Computer-Assisted Personal Interviews
CATI	Computer-Aided Telephonic Interviews
CCC	Ceylon Chamber of Commerce
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CMM	Capability Maturity Model
CRM	Customer Relationship Management
DCS	Department of Census and and Statistics
DMM	Digital Maturity Model
EDI	Electronic Data Interchange
ERP	Enterprise Resource Planning
FDA	Food and Drug Administration
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GSL	Government of Sri Lanka
ICT	Information and Communication Technology
ICTA	Information and Communication Technology Agency
IT	Information Technology
IoT	Internet of Things
ISO	International Organization for Standards
KII	Key Informant Interviews
NCE	National Chamber of Exporters
PARTNER	Partnership for Accelerating Results in Trade, National Expenditure, and Revenue
RPA	Robotics Process Automation
SLEDB	Sri Lanka Export Development Board
SME	Small and Medium-Sized Exporters
SRL	Survey Research Lanka (Pvt) Ltd
USAID	United States Agency for International Development

GLOSSARY OF TERMS

Criteria	The criteria are the elements that determine the maturity of each sub-dimension. The criteria are used to build the actual questions that will be used in the survey.
Digital Maturity	The extent to which technology and surrounding digital processes have become part of an organization's DNA rather than just a piece of the organization's day-to-day operations.
Digital Maturity Model	The Deloitte DMM is the first industry-standard digital maturity assessment tool created with the TM Forum, a global industry association for service providers and their suppliers in the telecommunications industry. It is composed of three levels; it becomes increasingly granular to assess the comprehensive digital maturity.
Dimension	The dimensions are the main organizational elements of the DMM. They provide a framework to increase the granularity of analysis. They are customized based on the context of the organization.
Enabling Environment	The environment in which SME exporters operate, the support they receive from the government and trade organizations, donor agencies, the collaboration among SMEs for knowledge-sharing, and their customer base.
Human Capital and Culture	Defining and developing an organizational culture with governance and talent processes to support digital maturation and the flexibility to achieve growth and innovation objectives.
Operations	Executing and evolving processes and tasks using digital technologies to drive strategic management and enhance business efficiency and effectiveness.
SME	According to the Sri Lankan National Policy Framework for SME Development, an SME is an enterprise that employs less than 300 employees and has an annual turnover not exceeding Rs. 750 Mn. For the manufacturing sector, a medium enterprise has a turnover of Rs. 251 to 750 Mn. and 51 and 300 employees, whereas a small enterprise has a turnover of Rs. 16 to 250 Mn. and 11 to 50 employees. The criteria vary slightly for medium enterprises in the service sector since the number of employees is 51 to 200.
Strategy	How the SME transforms or operates to increase its competitive advantage through digital initiatives; digital should be embedded in the overall strategy of the SME if it has a company strategy.
Sub-Dimension	Each dimension is composed of a customizable number of sub-dimensions. These sub-dimensions are the main elements that make up each dimension and allow an organization to see, within each dimension, where the most work is required to achieve digital maturity.
Technology	The technology that the SME uses in operations to drive business growth and competitive advantage.
Technology Governance	A technology governance framework defines the ways and methods an organization can implement, manage and monitor IT governance.

Table of Figures

List of Tables

Executive Summary

SMEs in Sri Lanka reportedly account for more than 52 percent of gross domestic product (GDP) and provide over 45 percent of domestic employment. As an emerging economy, Sri Lanka faces many hurdles when competing in international trade, and with the movement of global business toward e-commerce, digital has become a more pressing issue. Given the important contributions of SMEs to the Sri Lankan economy, the digital transformation of these firms can significantly improve their participation in international global value chains and the overall advancement of Sri Lanka on the global stage.

The USAID-assisted Partnership for Accelerating Results in Trade, National Expenditure and Revenue (PARTNER) Activity provides technical assistance to the Government of Sri Lanka and the private sector to improve trade facilitation and government efficiencies. Aligned to PARTNER's commitment to identify and facilitate opportunities for the private sector to improve their trade competitiveness, this study was executed to identify and recommend measures to promote the digitalization of SME exporters in Sri Lanka.

The study adopted a mixed-method approach, including interviews, desk research, and a field survey to collect and analyze data to measure digital maturity among Sri Lankan SME exporters. The Deloitte Digital Maturity Model (DMM) was leveraged to develop a customized questionnaire for surveying the digital maturity of SMEs across five core dimensions (Enabling Environment, Strategy, Technology, Operations, Human Capital, and Culture). The questionnaire was administered among 329 SMEs with representation from all nine provinces in the country, key export sectors and sub-sectors, and women-owned/-led businesses. Therefore, the scope of the study enables a comprehensive understanding of Sri Lankan SMEs' current level of digital maturity, helping to identify the strengths, weaknesses, and readiness of these firms to use digital technologies to engage in international trade.

The study's findings reveal a wide variance in the digital maturity of Sri Lankan SME exporters. A digital maturity score was calculated for each SME based on their survey responses and indicated to what extent technology and digital processes have become a part of an organization's day-to-day operations. The scores ranged from 8.8 to 98.8 percent and varied for enterprises based on size, sector, geographic location, and ownership. The assessment found that while SMEs have strong operations and processes to manage their business, there is substantial room for improvement in incorporating digital initiatives into business strategies.

There are several opportunities for the Government of Sri Lanka and its partners to strengthen the digital ecosystem in Sri Lanka. These include increasing digital access to trade and regulatory information, enhancing the existing online resources available to SMEs, and organizing knowledge-sharing programs to increase access to and understanding digital technologies that enable SMEs to find new clients and generate more business. The report also identifies ways SMEs can engage new customers and partners, collaborate on digital initiatives, and learn more about digital technologies through toolkits and trainings. The recommendations within this report can be applied generally to all enterprises, including size, sector, and geographic location. Strengthening the digital ecosystem in Sri Lanka will improve SMEs' outcomes and benefit the Sri Lankan economy.

1.0 Introduction

1.1 Digital Maturity in the Global Context

Since the Internet Revolution in the late 1990s, technology has become a critical accelerator to businesses worldwide. This importance has increased over the past 10 years as emerging digital technologies including—but not limited to—AI, quantum computing, and the IoT have moved from theoretical to actionable. An increasing number of businesses, most notably in advanced economies, have begun to reconfigure their operations around these technologies to improve efficiencies while maximizing the customer experience. For instance, 87 percent of US business leaders surveyed perceive digitization as an essential factor for their business's performance and growth (Digital Transformation Success Stories Examples and How to Avoid Mistakes, 2018).

Technology has become critical to businesses worldwide as they look to gain a competitive edge in ever-evolving international markets. The Forrester Analytics Business Technographics Priorities and Journey Survey (2020) found that information technology (IT) maturity directly translates to greater competitiveness by allowing for greater focus on customers and customer experience (Cameron et al., 2021).

In developed economies, one in five businesses is at an advanced level of digital maturity, meaning they are fundamentally transforming how they operate using technology as a central catalyst (Fenwick et al., 2021). Digital transformation enables these enterprises to "grow faster and be more adaptive, creative, and resilient" (Fenwick et al., 2021, page 1).

While digital transformation has often been a focus of larger companies, smaller companies are beginning to take advantage of emerging technology and the accessibility of digital capabilities. For instance, SMB Group's U.S. Small and Medium Business Digital Transformation Study found that nearly half of small and medium enterprises (SMEs) surveyed "are currently planning to engage in activities that will help them adapt and transform their businesses for a digital future." In addition, around 75 percent of companies surveyed agreed that digital technology was affecting how they did business (Lincoln 2019, as cited in Vaidyanathan, 2020).

To compete with advanced economies and maintain relevancy in global markets, businesses in lower- to middle-income countries must begin to incorporate digital into their operations.

1.2 Definition of Digital Maturity

An assessment of digital maturity indicates where an enterprise is in its digital journey. It extends beyond simply using emerging technology, including—but not limited to—platforms as a service, artificial intelligence (AI), machine learning (ML), edge computing, Internet of Things (IoT), 3D printing, and quantum computing. Rather, it is the reorientation of the whole business and enabling environment around technology to help an enterprise decrease costs, increase its market share, and enhance its competitiveness. Thus, digital is embedded in an enterprise's DNA. In this way, an enterprise looks beyond just the implementation of technology to become digitally mature.

This study assessed digital maturity through this lens. In this way, the study also recommends not simply how an enterprise can use digital technology but also how it can optimize its business ecosystem around it.

DELOITTE DEFINES DIGITAL MATURITY AS:

The extent to which technology and surrounding digital processes have become part of an organization's DNA rather than just a piece of the organization's day-to-day operations

1.3 Digital Maturity in Sri Lanka

Given the importance of digital maturity in the global context, the ability for Sri Lanka to expand its competitiveness in the global market is impacted by its level of digital maturity. Previous studies on digital maturity in Sri Lanka indicate that although Sri Lanka exhibits lower levels of digital maturity, the potential for digital expansion is high. Overall, Sri Lanka is more mature than many other Asia Pacific markets (Bustis et al., 2018). However, Sri Lanka still lags behind more digitally advanced countries such as China and India in the region (Bustis et al., 2018).

A 2018 McKinsey & Company study examined 50 Sri Lankan enterprises and found that the digital maturity across them varied widely. The McKinsey study also found that 90 percent of the surveyed companies' existing digital initiatives only address a limited number of opportunities. Additionally, these initiatives are not well integrated within the larger business (Bustis et al., 2018). Most importantly, the study noted that Sri Lankan businesses must focus on holistic digital transformation to ensure effectiveness.

Digital has become a more pressing issue especially within the trading community in Sri Lanka, given the recent movement toward e-commerce. A study on e-commerce in Sri Lanka by Commonwealth and Sri Lanka Export Development Board (SLEDB) (2020) found that e-commerce has grown rapidly, spurred by increased access to the Internet and the COVID-19 pandemic. Since 2018, the number of Internet users in the country has increased from ~30 to 51 percent, with 37 percent of Internet users active on one or more social media platforms (Kemp, 2021). In addition, 80 percent of all Sri Lankans have a broadband connection, and the number of mobile connections was equivalent to 142 percent of the total population. (Kemp, 2021). Despite this growth, the study found that the country is still relatively immature in its use of e-commerce, ranking low on a scale of maturity (The Commonwealth & Sri Lanka Export Development Board, 2020). This low ranking indicates there is great potential for e-commerce growth in Sri Lanka. To activate its potential, SMEs and the Government of Sri Lanka (GSL) need to improve the fragmented nature of digital interventions, enhance SME digital maturity, and catalyze SME participation in the global market.

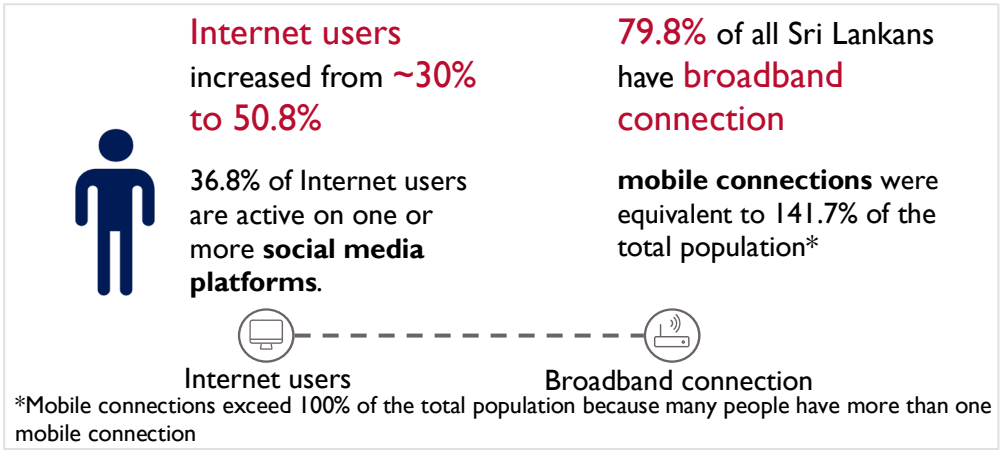


Figure 1: Digital 2021: Sri Lanka (Kemp, 2021).

2.0 Overview of the SME Landscape in Sri Lanka

2.1 Sri Lankan Context: Importance of SMEs, Trade, and Digitalization

As an emerging economy, Sri Lanka faces many hurdles when competing in international trade. As shown in Figure 2 below, Sri Lanka's exports as a percentage of GDP have fallen since the early 2000s before marginally recovering in 2010. Exports fell again in 2020 because of the COVID-19 pandemic (Wijayasiri, 2020). However, Sri Lanka struggled to grow its exports even before the pandemic. The Government of Sri Lanka (GSL), in *its National Policy Framework Vistas of Prosperity and Splendor*, outlined the goal of reducing the trade deficit and expanding exports through value-added industries (Ministry of Finance, 2020) and the competitiveness of Sri Lankan exports.

Sri Lankan SMEs play a significant role in the country's economy. SME activity accounts for over 52 percent of Sri Lankan GDP and over 45 percent of employment (Tennakoon, 2015). In addition, they account for 75 percent of all enterprises (Tennakoon, 2015). SMEs are dispersed across all sectors of the economy, accounting for 20 percent of all industrial and manufacturing enterprises and 90 percent of all service enterprises (Piyoshila, 2012). Although there are 3,027 SME exporters in Sri Lanka, they cumulatively contribute to less than 5 percent of Sri Lanka's exports (Wijayasiri, 2016). Most of Sri Lanka's exports come from a few large firms (Wijayasiri, 2016). Therefore, SMEs' prominent role in the domestic economy is not equally reflected in international trade, providing growth opportunities.

SME ACTIVITY ACCOUNTS FOR **52%** GDP | **45%** EMPLOYMENT | **3,027** SME EXPORTERS

There is an opportunity to increase the competitiveness of Sri Lanka SMEs by focusing on improving their digital maturity. In this regard, both the private sector and GSL recognize digital transformation's potential role in this space. In its *National Policy Framework Vistas of Prosperity and Splendor* document, GSL outlines its ambition to establish Sri Lanka as a technology-based society. In this regard, GSL desires to make Sri Lanka a global innovation hub for advanced technology, create a citizen-centric digital government, and increase digital inclusion (Ministry of Finance, 2020).

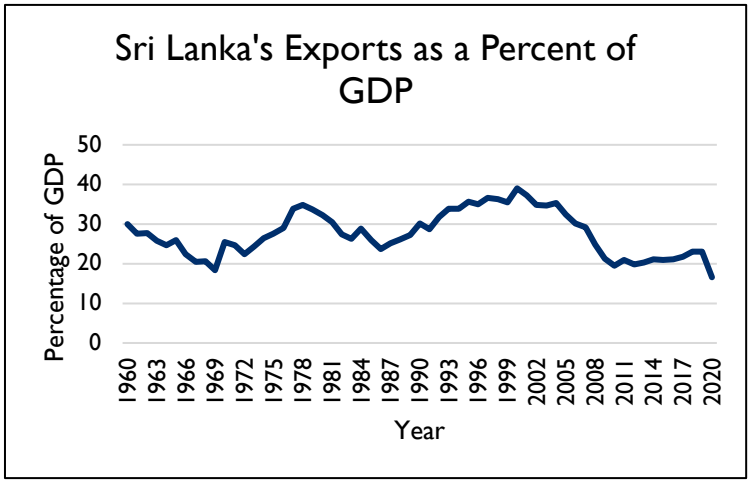


Figure 2: Exports as a Percentage of GDP (Data from the World Bank)

In keeping with this goal, the government has undertaken several digital initiatives related to international trade. For instance, GSL implemented the Sri Lankan Trade Information Portal in July 2018, providing trade-related regulatory information and increasing trade facilitation among Sri Lankan enterprises (World Trade Organization, 2018). In addition, Sri Lanka Customs launched an online payment platform in partnership with the Central Bank of Sri Lanka in 2017 to facilitate Sri Lankan businesses' ability to easily pay custom duties and move goods quickly (LBO, 2017). These initiatives, among others, reflect recognition by GSL of the power of digital technology to transform operations and enhance economic growth.

Improved digital technology could reduce time to market, improve customer experience, increase productivity, and more (Rasool & Dissanayake, 2019). It is also important to consider its impact on fostering women's participation in the formal economy. Promoting digital technology among women entrepreneurs will enhance the country's economic growth and provide employment opportunities (Madurawala, 2015). Digital provides numerous other benefits to SMEs, some of which are summarized in Figure 3.

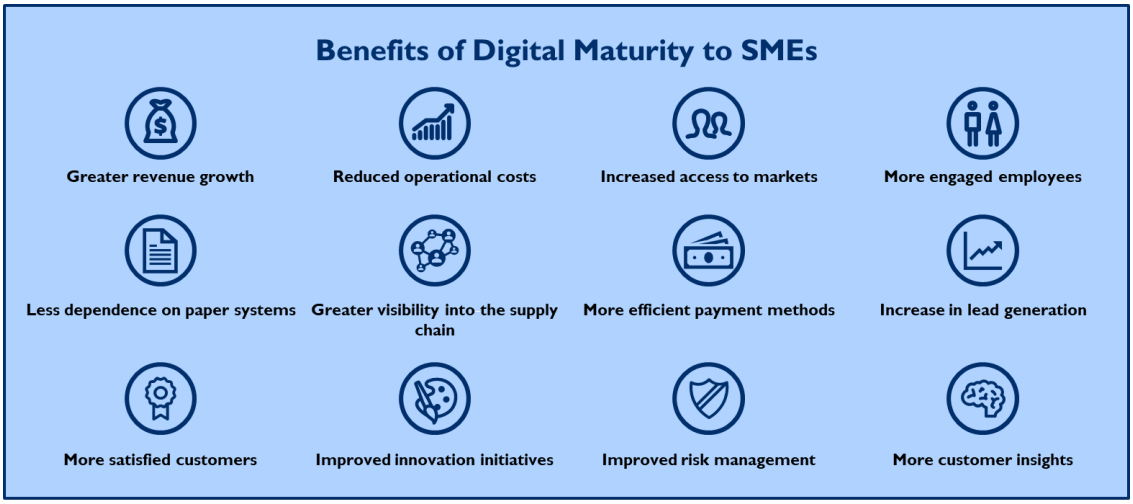


Figure 3: Benefits of digital maturity for SMEs.

SMEs also recognize the need to become digitally mature. According to stakeholder consultations, many SMEs have expressed an interest in incorporating more advanced technology into their operations. Some have begun to implement digital initiatives on their own. For instance, the agriculture sector has implemented a marketplace platform to match buyers and sellers of agri-produce. Additionally, some start-up SMEs have begun to market directly to consumers abroad through social media. These channels have allowed SMEs to reach a broader consumer base for their products and find new customers.

2.2 Objectives of the Study

The USAID-assisted Partnership for Accelerating Results in Trade, National Expenditure and Revenue (PARTNER) project provides technical assistance to the Government of Sri Lanka and the private sector to improve trade facilitation and government efficiencies. PARTNER is a five-year project funded by USAID and implemented by Deloitte Consulting LLP from August 2019 to August 2024. Under the objective of improving trade facilitation, the outcomes include increasing institutional GSL capacity on trade, strengthening trade policies and their implementation to remove bottlenecks for international trade, and strengthening the private sector's ability to export and import.

This study, which supports the third outcome, aims to identify and recommend policies and assistance toward promoting the digitalization of SME exporters in Sri Lanka. The objectives of the study include:

1. Understand the current level of SME digital maturity in Sri Lanka.
2. Identify SMEs' strengths, weaknesses, and readiness to using digital technologies to engage in international trade.
3. Provide recommendations and suitable interventions to improve SMEs' digital readiness.

This study will benefit the following stakeholders:

- For SME exporters, this study identifies their digital maturity level and areas for improvement. In addition, it provides insights for chambers of commerce and industry associations to come up with evidenced-based initiatives to assist SME exporters.
- For the GSL policymakers, this study provides a baseline of the digital maturity level of Sri Lankan SME exporters and informs policy priorities to assist the sector better.
- This study identifies areas for technical assistance to GSL and the private sector for development-assistance agencies, including the USAID PARTNER project.

2.3 Overview of the Report

This report is organized as follows. Section 3 summarizes models to assess the digital maturity of businesses and explains the selection of the Deloitte DDM used in this study. Section 4 outlines the methodology adopted for the assessment as well as the limitations of the study. Section 5 summarizes the data sample profile and Section 6 discusses the survey findings, including the current state of digital maturity of SMEs in Sri Lanka, followed by the recommendations to improve digital readiness and suitable policy interventions. Section 7 concludes the report and summarizes the findings.

3.0 Review of Digital Maturity Models and Methods of Digital Assessments

To assess the digital maturity of SMEs in Sri Lanka, this study leveraged a digital maturity model to evaluate the progress SME exporters have made toward digital transformation and identify pathways for continued growth. Digital maturity models have become popular assessment methods in recent years as digital transformation increases in importance for governments and businesses (Williams et al., 2019). Digital maturity models are adaptations from general maturity models that help enterprises evaluate the quality of systems and processes related to broader digital transformation initiatives.

The Capability Maturity Model (CMM) is among the most well-known maturity models. First developed in the early 1990s by the Software Engineering Institute (SEI) and the United States federal government, it was one of the first models that allowed enterprises to evaluate their process maturity (Paulk et al. 1993). Since its initial publication, this model has been updated to reflect changes in technology and understanding of business processes. However, general maturity models such as the CMM are insufficient to evaluate digital transformation. These models focus on general business capabilities while important, do not provide the focus needed to accurately assess digital maturity (Williams et al., 2019). Additionally, digital transformation is a broad topic, requiring specific definitions not captured in general maturity models (Paulk et al. 1993). Thus, digital maturity models have evolved to become the primary method to assess digital maturity by businesses, government, and academia.

Due to their popularity, many businesses and academic groups have developed their own maturity models. Some examples include the models developed by McKinsey & Company, Forrester, and Deloitte. Additionally, academics such as Schumacher, A. Erol, S., & Sihn, W. (2016) have developed their models. Some digital maturity models share common characteristics. For instance, in their review of digital maturity models, Williams *et al.* (2019) found common phrases and words used in most maturity models. Despite these similarities, these models differ in crucial ways. Most importantly, these maturity models vary in their scope and level of granularity; some models are more general, while others are industry-specific (Williams et al., 2019).

For this reason, it is important to choose a model that can be contextualized and fit the unique circumstances of the enterprise or industry whose digital maturity is being assessed. For instance, Forrester specifically created its digital maturity model for retailers in advanced economies with little applicability to industries outside of it (Swerdlow et al., 2020). This model captures industry nuances and is granular at the expense of broader applicability. Conversely, McKinsey created a *general* digital maturity model known as Digital 20/20 that is not industry-specific and covers a broader range of industries (McKinsey & Company, 2021). A general model such as the one used by McKinsey can provide examination across one or multiple industries. Therefore, it can provide benchmarking against peers and competitors and comparative analysis. However, it is not as granular as a model such as the one developed by Forrester, as it does not account for specific industry nuances that might impact overall digital maturity. While no model can be objectively deemed "better" than the other, its relevance is determined by the purpose of the study and its context. The model chosen for any digital assessment should reflect the circumstances of the enterprise or industry being assessed.

3.1 Deloitte Digital Maturity Model

Deloitte Consulting, LLP developed the Deloitte DMM in 2014 to evaluate digital maturity across businesses and continues to be updated annually. TM Forum, a global industry association for service providers and their suppliers in the telecommunications industry, helped to create it. Additionally, subject-matter experts from numerous companies provided their review of this model.

The DMM has been widely used across industries within and outside the United States. For instance, it was deployed in Belgium to assess the digital maturity of the country's banking industry, finding significant gaps in digital maturity across the banking sector (de Groote et al., 2017). It was deployed in various contexts in the United Kingdom as well and adapted to help frame other surveys that assess digital transformation in different industries. In each instance, the model was modified as needed to fit the local context, as was done for this study.

The Deloitte DMM is broken down into three levels—dimensions, sub-dimensions, and criteria.

1. Dimension
The dimensions are the main organizational elements of the DMM. They are customized based on the context of the organization.

2. Sub-dimension
Each dimension is composed of a customizable number of sub-dimensions. These sub-dimensions are the main elements that make up each dimension and allow an organization to see, within each dimension, where the most work is required to achieve digital maturity.

3. Criteria
The criteria are the elements that determine the maturity of each sub-dimension. The criteria are used to build the actual questions that will be used in the assessment.

The DMM covers a wide range of capabilities that can be customized to fit different contexts. The contributions from outside experts in creating the model mean that it contains over 100 different dimensions, sub-dimensions, and criteria that can be modified and condensed as needed to fit different circumstances.

Box 1: Providing Digital Insights from the Belgian Retail Banking Sector

DMM was customized to assess retail banks in Belgium and pointed to a bigger than expected gap in the digital maturity between banks in the market. This was a significant finding since clients increasingly select their banks based on digital convenience (de Groote et al., 2017). Belgian banks had invested in advancing their digital maturity toward servicing their clients but struggled to transform their internal organizations. The assessment identified the most impactful focus areas for digital maturation and drove the development of a road map to achieve homogeneity in digital maturity across the sector.

4.0 Methodology

This study adopted a holistic approach, including interviews, desk research, and a field survey to collect and analyze data measuring digital maturity among Sri Lankan SME exporters. The study consisted of four phases: the Discovery Phase, Survey Capabilities Creation Phase, Survey Administration Phase, and Data Analysis Phase.

Box 2: Assessment Advisory Committee

An Advisory Committee (AC) was formed to provide guidance and support in the implementation of the survey for the duration of the project. This committee was composed of nine members from the Information and Technology Agency (ICTA), Ceylon Chamber of Commerce (CCC), National Chamber of Exporters (NCE), SLEDB, and local SMEs engaged in exports.

The objectives of the AC were to:

- Provide comments, and suggestions on the approach of the assessment to ensure relevancy
- Support the identification of respondents for the survey
- Participate in dissemination event(s) and provide support as necessary

4.1 Discovery Phase

During the Discovery Phase, key challenges and areas of focus were identified in order to properly tailor the DMM to Sri Lanka's SMEs and the broader national ecosystem.

As part of this phase, the study reviewed existing literature on digital transformation in Sri Lanka and the challenges SMEs face. In addition to the desk research, key informant interviews (KIIs) and two focus group discussions (FGDs) were conducted with relevant stakeholders to better understand challenges SMEs face. FGDs included 16 SME exporters from diverse sectors such as agriculture, manufacturing, and services. These consultations were supplemented by a literature review. In May 2021, the preliminary findings from the Discovery Phase were presented to an AC, which was set up for the purpose of guiding the study through the project cycle (see Box 2 on the objectives and the role of AC).

4.2 Survey Capabilities Creation Phase

Using the research from the Discovery Phase, the study then customized the DMM to fit the Sri Lankan context and develop a survey questionnaire. This customization led to the five dimensions (Enabling Environment, Strategy, Technology, Operations, Human Capital & Culture), 17 sub-dimensions and 39 criteria, which were used to evaluate SMEs' digital maturity via the questionnaire (see Box 3 for details).

These dimensions, sub-dimensions, and criteria were chosen to reflect the current state of Sri Lankan export SMEs and the main challenges they face in digital transformation. These dimensions, sub-dimensions, and criteria were presented to the AC in September 2021, and feedback was sought to ensure their relevance and accuracy.

The DMM qestionnaire consisting of 85 structured questions was translated into three languages (Sinhala, Tamil, and English) and pilot tested among 30 SMEs. The results from the pilot testing informed the further refinement of the questionnaire before the survey was fully administered. In December 2021, another AC meeting was held to review and validate the results from the pilot interviews and how to improve SME engagement and participation in the survey.

Box 3: Customizing the Deloitte Digital Maturity Model

The Deloitte DMM was used as the baseline model consisting of six dimensions, 25 sub-dimensions, and 139 criteria. This general model was customized based on the information received during the focus group discussions, literature reviews, and pilot interviews. As a result, the Sri Lanka DMM contains five dimensions, 17 sub-dimensions and 39 criteria.

The specific customizations included two additional sub-dimensions (Government Institutions/Legal & Regulatory and Profession Groups) under the **Enabling Environment** dimension, two new sub-dimensions within the **Strategy** dimension (Resource Management and Digital Strategy), and consolidation of the Data and Technology dimensions into one dimension (**Technology**). These customizations aimed to gather insights for the entire digital ecosystem SMEs operate and understand SMEs' digital strategy.

The five dimensions of the Sri Lanka DMM are as follows:

1. **Enabling Environment:** The environment in which SME exporters operate, the support they receive from the government and trade organizations, donor agencies, the collaboration among SMEs for knowledge-sharing, and their customer base.
2. **Strategy:** Focuses on how the SME transforms or operates to increase its competitive advantage through digital initiatives; digital should be embedded in the overall strategy of the SME if it has a company strategy.
3. **Technology:** Underpins the technology that the SME uses in operations to drive business growth and competitive advantage.
4. **Operations:** Executing and evolving processes and tasks by utilizing digital technologies to drive strategic management and enhance business efficiency and effectiveness.
5. **Human Capital & Culture:** Defining and developing an organizational culture with governance and talent processes to support digital maturation and the flexibility to achieve growth and innovation objectives.

These dimensions were further broken down into 17 sub-dimensions and 39 criteria to comprehensively assess SMEs' digital maturity. The criteria were then used to create questions for the survey.

4.3 Survey Administration

This study utilized a local survey company, Survey Research Lanka (Pvt) Ltd (SRL), to administer the survey among a representative sample of 329 SMEs engaged in exports of goods and services (or 10 percent of the population of SME exporters in the country). PARTNER worked with the SLEDB, CCC, NCE, and ICTA to compile a list of SMEs into a database from which SMEs were selected for the survey. The sample was drawn on a stratfied basis to ensure adequate representation of diverse SME population by size, location, sector, sub-sector, and ownership. A quota sampling technique was used to ensure representation of each of the above characteristics in the study's total sample.

The survey sample quotas were carefully defined to be representative of SME exporters in the country. The Department of Census and and Statistics Economic Census 2013/2014 was referenced to establish the initial quotas for size and scale of enterprises, geographic location, sector and sub-sector categories, and representation of women-owned/led enterprises. However, the economic census captured data for all enterprises operating in the country and was not focused specifically on exporter sector. Therefore, the sample quotas were adjusted further after a discussion with the EDB.

A team of 22 enumerators were trained and deployed to conduct face-to-face interviews using computer-assisted personal interviews hosted on the SurveyToGo platform. Due to COVID-19 concerns, computer-aided telephonic interviews were conducted upon request by respondents. The data collection process is illustrated below. The island-wide data collection process spanned six weeks, from the beginning of December 2021 to the third week of January 2022.

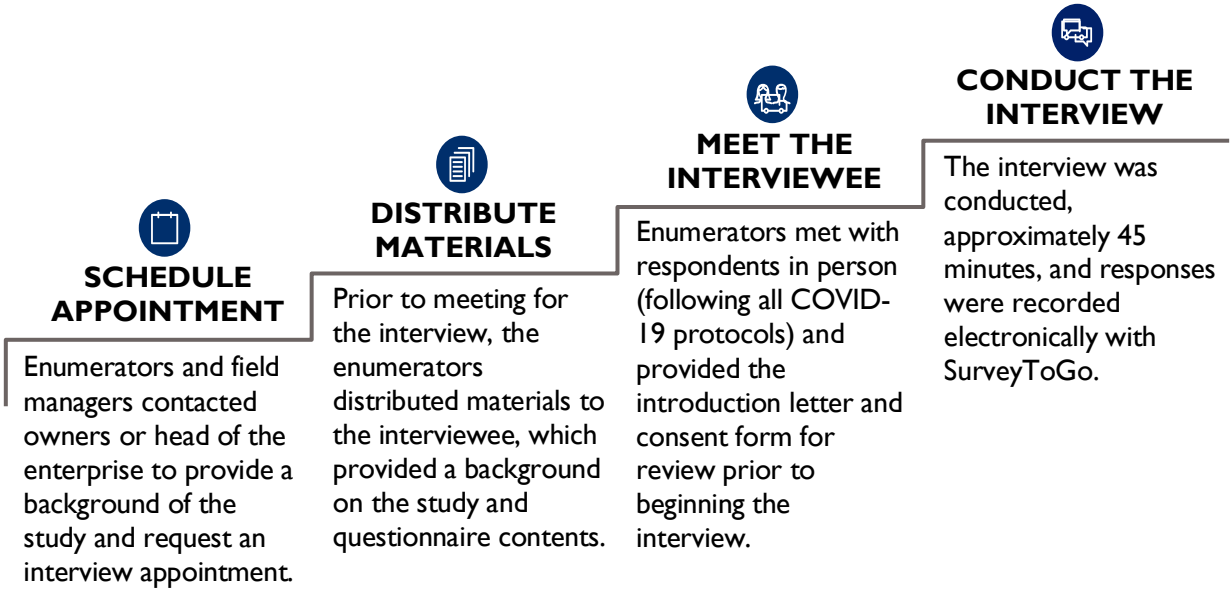


Figure 4: Data-collection process.

4.4 Data Analysis

The digital maturity score represents the as-is digital capabilities of SMEs and provides a basis for prioritizing growth opportunities. In this study, the digital maturity score for each SME was calculated using the cleaned data file Survey Research Lanka (Pvt) Ltd (SRL) provided by SRL. Within this file, all data was anonymized using an assigned ID. A scoring key was drafted to document how each question was scored and the maximum points for each question. The digital maturity score was calculated as an average of all scored questions. Due to the filtering of the questionnaire (some qualitative questions included), not all questions were scored. However, all scored questions were weighted equally. The digital maturity score was calculated for each SME and filtered by sector and dimension for further analysis.

4.5 Methodological Limitations

The survey results and final dataset must be viewed considering the following constraints:

- A quantitative survey method was used with objective questions to gain insights from respondents and calculate a digital maturity score for each SME. This limited the ability to probe deeper into SME's responses and the specific issues they were facing. However, the survey questionnaire did include nine text field options for detailed responses while the information provided during the KIIs and two FGDs at the discovery stage of the study presented specific challenges that SMEs face.

- The compiled database of SMEs contained enterprises mostly located in the Western Province. Thus, a snowballing sampling method was used to source contacts of exporters outside of Western Province to achieve the allocated sample for the other provinces. Additionally, SRL visited Pradeshiya Sabhas to collect contacts of exporters who are not registered in the EDB database but instead may be enlisted with the local authorities.

- Due to COVID-19, some companies were reluctant to meet in-person for an interview. In these cases, a manager of the survey company who was very familiar with the questionnaire conducted the interview via telephone and recorded their responses. For all in-person interviews, all COVID-19 protocols were followed to ensure the safety of enumerators and respondents.

5.0 Data Sample Profile

The questionnaire contained background questions to collect general information, demographic data, product information, and financial information of SMEs. The data collected was used to understand the sample profile and ensure that it represented a diverse set of SMEs in the country. The findings show that the SMEs interviewed were of different sizes (small and medium), sectors (agriculture, manufacturing, service) and sub-sectors, geographical locations, and ownership type by gender (e.g., women-owned/-led enterprises). There were also items to consider: ownership of the enterprise (family-owned), export destinations and source markets, export orientation, annual turnover, export value, how long the enterprise has been operating, and additional information about the enterprise's owner.

The survey covered 329 SME exporters across three sectors (agriculture, manufacturing, and services) and 38 sub-sectors. Below is a summary of the sample characteristics.

ENTERPRISE SIZE

This study focused specifically on small and medium enterprises engaged in exports and used the Sri Lankan *National Policy Framework for SME Development* definition to categorize each enterprise. The latter categorizes enterprises based on the number of employees and turnover. An SME is an enterprise that employs less than 300 employees and has an annual turnover not exceeding Rs. 750 Mn. For the manufacturing sector, a medium enterprise has a turnover of Rs. 251 to 750 Mn. and 51 to 300 employees, whereas a small enterprise has a turnover of Rs. 16 to 250 Mn. and 11 to 50 employees. The criteria vary slightly for medium enterprises in the service sector since the number of employees is 51 to 200. According to the above definition (number of employees), the sample was made up of 64 percent of small enterprises (211 enterprises) and 36 percent of medium enterprises (118 enterprises). Figure 5 shows the distribution of full-time employees in an enterprise during a typical year. The majority of SMEs within the sample had 11 to 50 full-time employees, and only a small portion of the sample had 201 to 300 full-time employees.

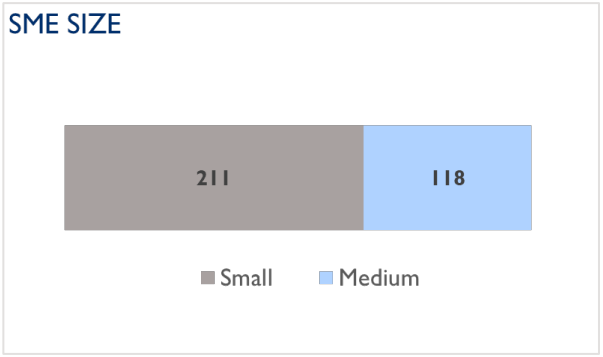


Figure 5: SME sample size distribution.

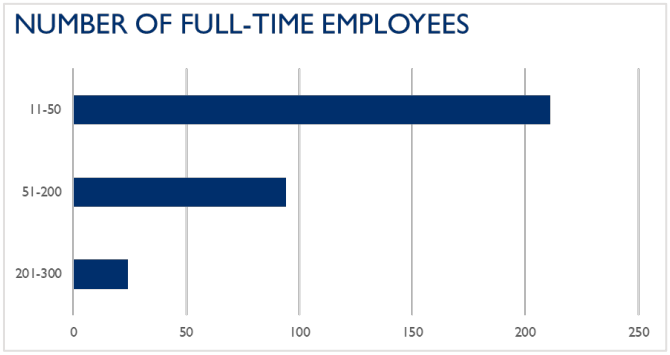


Figure 6: The number of full-time employees for SMEs within the sample.

SECTORAL BREAKDOWN

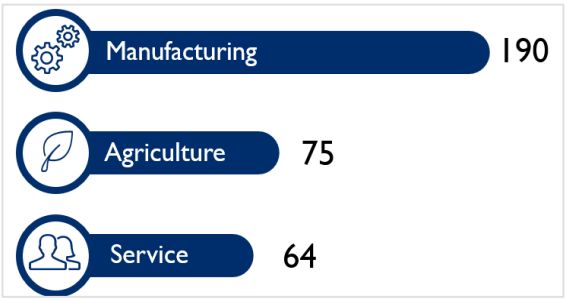


Figure 7: SME sample sector distribution.

The three sectors represented in the study were manufacturing, agriculture, and service. Most of the sample consisted of enterprises from the manufacturing sector with 190 SMEs, followed by agriculture (75) and service (64). The three sectors were further broken down into 38 sub-sectors to obtain a wide range of representation of export industries in the sample.

LOCATION

Data was collected from SMEs located in all nine provinces in the country. Due to the lack of geographical spread of export-oriented SMEs and the concentration of enterprises in some regions, most respondents were in the Western Province (214), followed by the North Western Province (40) and Central Province (28). The provinces with the least responses were the Uva Province (3) and the Eastern and Northern Provinces, with two SMEs for each. The sample also had 15 SMEs in an export processing zone or industrial park. This information was helpful in understanding if they received additional resources to facilitate their exports.

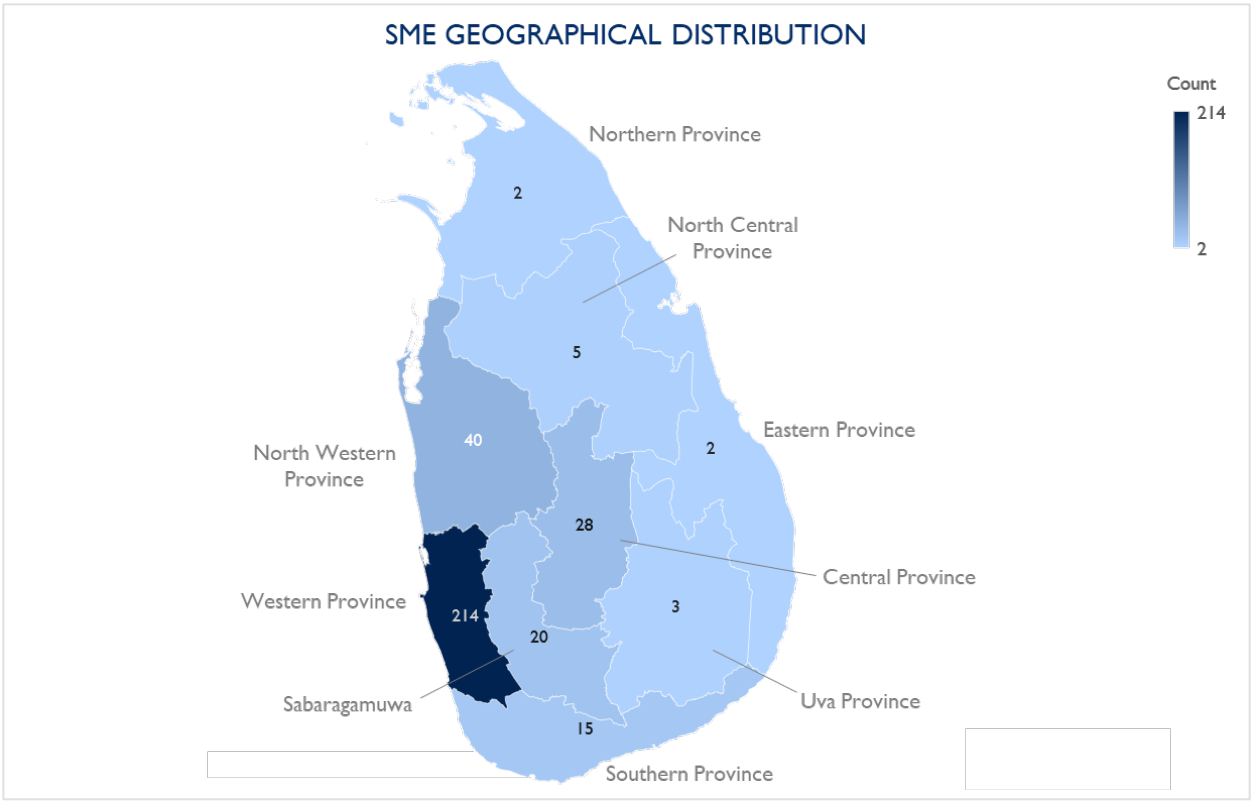


Figure 8: SME sample geographical distribution.

AGE OF THE ENTERPRISE

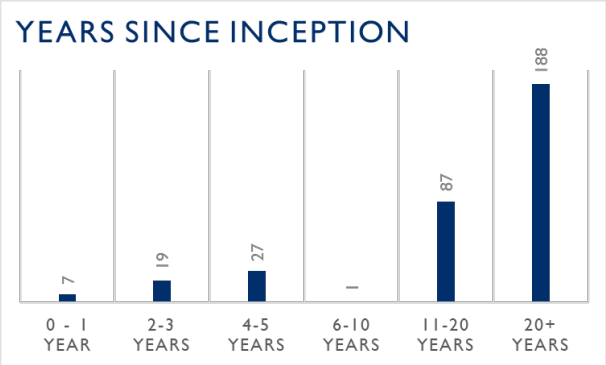


Figure 9: The years since an SME in the sample started their business.

The age of an enterprise is an important characteristic in understanding how long SMEs have been established in their respective industries. The sample population had many SMEs that have been in business for more than 20 years, and only 54 SMEs have been in business for less than 10 years. [1]

OWNERSHIP

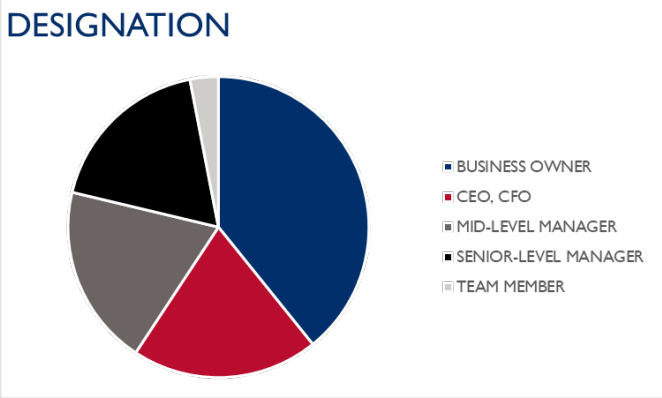


Figure 10: The designation of survey respondents.

The respondents of the survey held senior positions within the enterprise. The respondents included 129 enterprise owners, 66 CEOs or CFOs, and 124 managers. Many respondents did not know or want to reveal the age of the owner of the enterprise. Among the responses, most owners were over 59 years old or within the 49 to 59 range. Only a small portion of the sample had enterprise owners that were younger than 40 years of age.

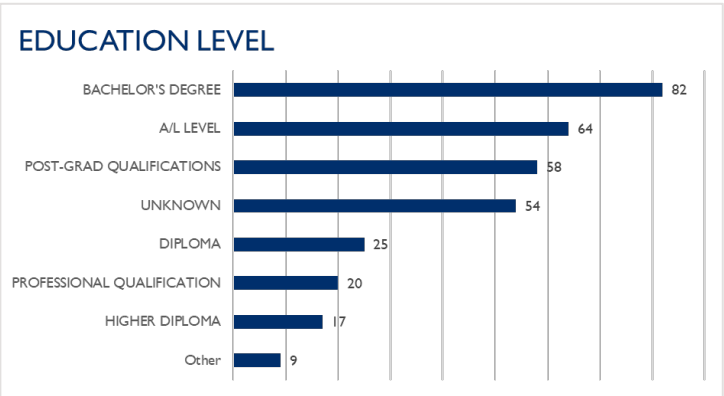


Figure 11: The education level of SME owners within the sample.

The respondents were also asked to provide the educational background of enterprise owners, given the implications of education on technological adoption. Most owners have degrees and other qualifications. Within the sample, many owners have bachelor's degrees (82). The number of advanced-level and post-graduate qualifications were 64 and 58, respectively, and only 17 owners had higher diplomas.

1. There is not a sufficient sample size for 'age of enterprise' and 'education level' to conduct analysis for the digital maturity of these variables. Further quantitative analysis and/or interviews with the SMEs with tenures between 0-1 years is recommended to better understand their unique perspectives.

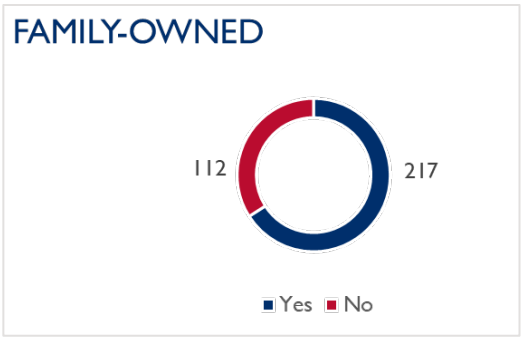


Figure 12: SME sample ownership distribution highlighting family-owned enterprises.

The majority of the survey sample had family-owned enterprises.[2] Approximately 66 percent of the enterprises were family-owned.

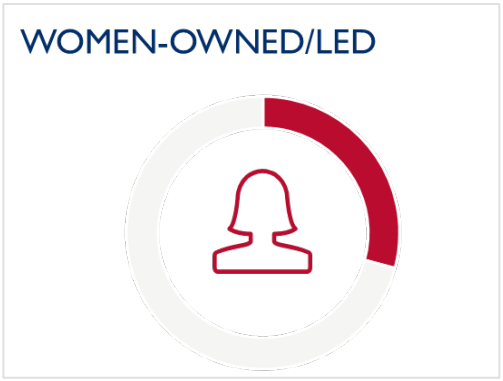


Figure 13: SME sample ownership distribution highlighting women-owned/-led enterprises.

An important consideration for this study was understanding the maturity level of women-owned/-led enterprises[3] to provide specific recommendations that will help to advance their competitiveness and growth. The representation of women-owned/-led enterprises in the sample was approximately 29 percent (or 96 SMEs), which exceeded the initial sample target of 20 percent.

PRODUCT

Figure 14 below shows the top three countries where SMEs within the sample exported their products. The top three countries were the United States of America, India, and Europe. Figure 15 shows the top three import countries of SMEs in terms of the value of imports. The top three countries with the highest value of imports were China, India, and the United States of America.

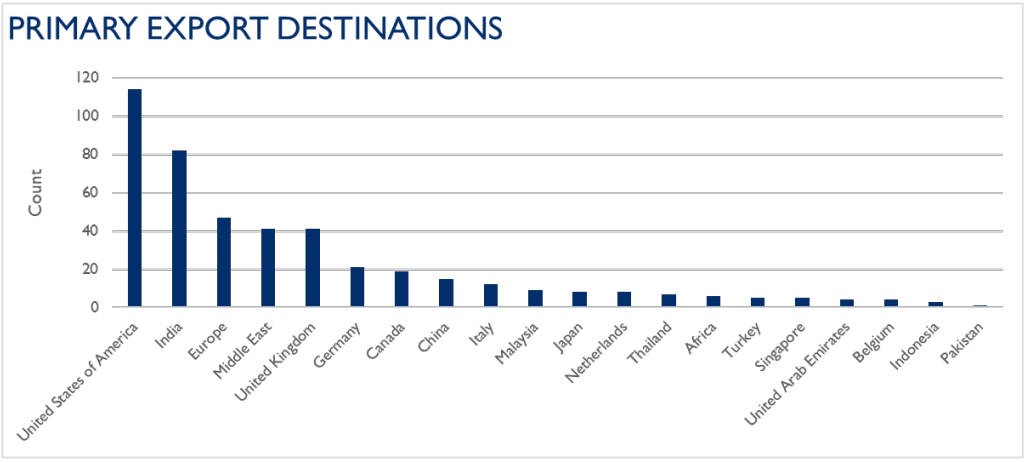


Figure 14: The number of SMEs that primarily export to these destinations.

2. Family-owned enterprises is defined as any business in which two or more family members are involved in the business and the majority of ownership or control lies within a family.
3. Women-owned/led enterprises is defined as any business in which the leader of owner of the company is a woman.

Figure 15: The number of SMEs that primarily import from these countries.

FINANCIAL

SMEs were also asked what their annual turnover is in a typical year. Due to the sensitivity of this question, SMEs had the option to not provide this financial information. Most SMEs that responded had a turnover of Rs. 16 to 250 Mn. Only a small number of enterprises had an annual turnover greater than Rs. 751 Mn.

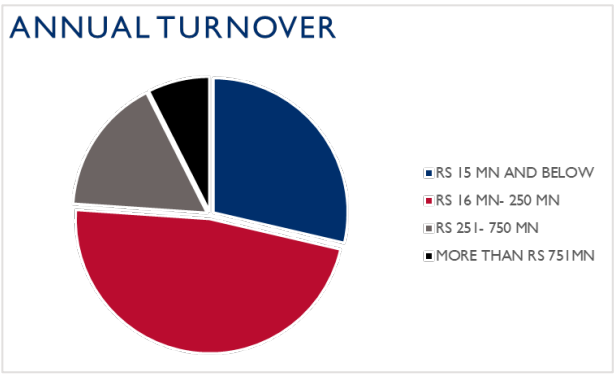


Figure 16: The annual turnover of SMEs within the sample.

SMEs were requested to provide information on the total value of their imports and exports per annum in a typical year. The value of imports and exports follow similar trends, with most SMEs reporting import and export values of Rs. 15 Mn. and below and Rs 16 to 250 Mn, respectively.

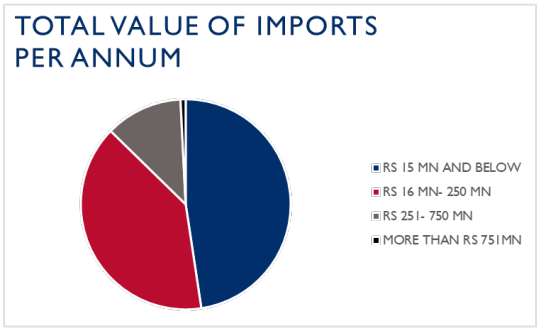


Figure 17: The total value of SME imports per annum.

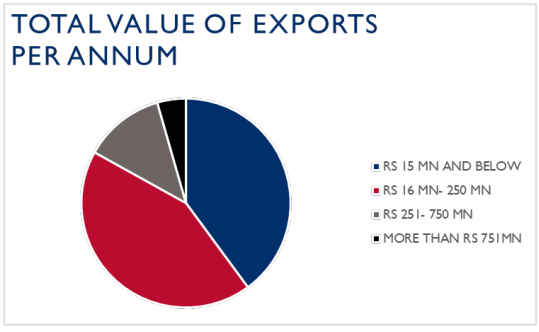


Figure 18: The total value of SME exports per annum.

6.0 Findings and Recommendations

6.1 Overall Findings

There is significant variance in the digital maturity of Sri Lankan SMEs, which presents a variety of growth opportunities for Sri Lanka. The figure below represents how many sampled SMEs fall under different digital maturity score groupings. The digital maturity scores of SMEs range from 8.8 percent to 98.8 percent, but most SMEs fall into the ranges of 25 percent and 75 percent. The SMEs that fall below 25 percent are considered *underdeveloped* with low digital capabilities and/or organizational readiness. SMEs between 25 percent and 75 percent are *developing* with average to good digital capabilities and internal readiness allowing enterprises to capture some value out of digital. Lastly, SMEs with digital maturity scores above 75 percent are *leaders* with an ideal target level of digital maturity combining digital capabilities with strong organizational readiness to unlock the full potential digital has to offer.

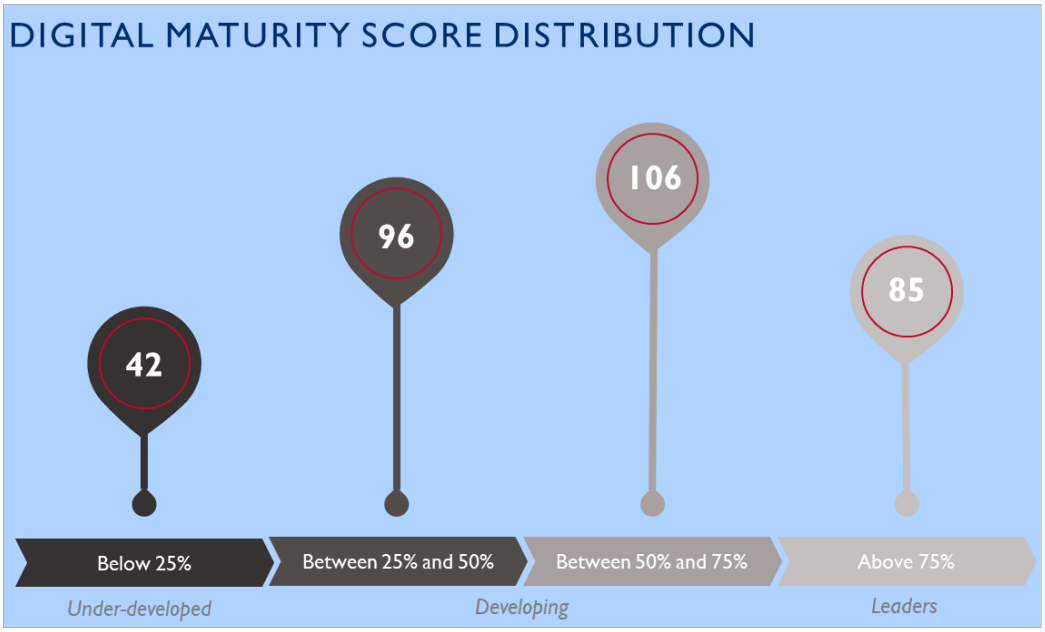


Figure 19: The digital maturity scores of SMEs.

The size of an enterprise correlates with the level of digital maturity. Figure 20 shows a clear gap between the digital maturity scores for small and medium enterprises. Small enterprises have a lower digital maturity score of 51 percent, whereas medium enterprises trended toward a digital maturity score of 69 percent.

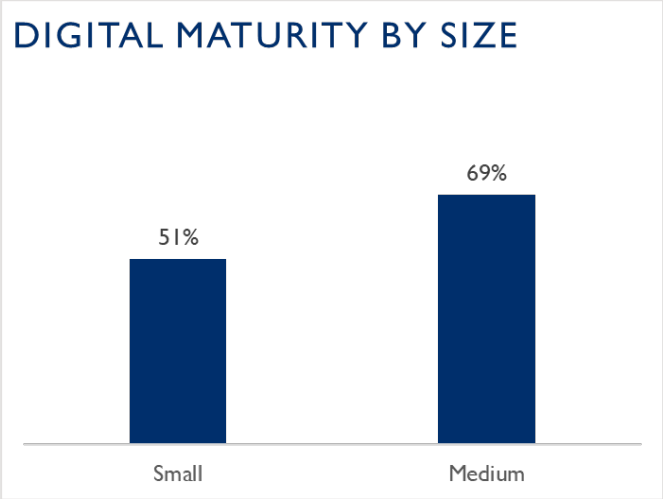


Figure 20: The digital maturity of SMEs by the size of their enterprise.

The digital maturity scores of each sector and sub-sector provide insight into sector-specific regulations or technologies to help increase their digital maturity. The results reveal that the service sector has the highest digital maturity with a score of 67 percent, followed by the manufacturing (56 percent) and agriculture (47 percent) sectors. Figure 22 captures the digital maturity of sub-sectors with more than 10 responses against their 2021 export performance. The sub-sector with the highest digital maturity of 79 percent is ICT, followed by tea (64 percent) and rubber and rubber-based products (61 percent).

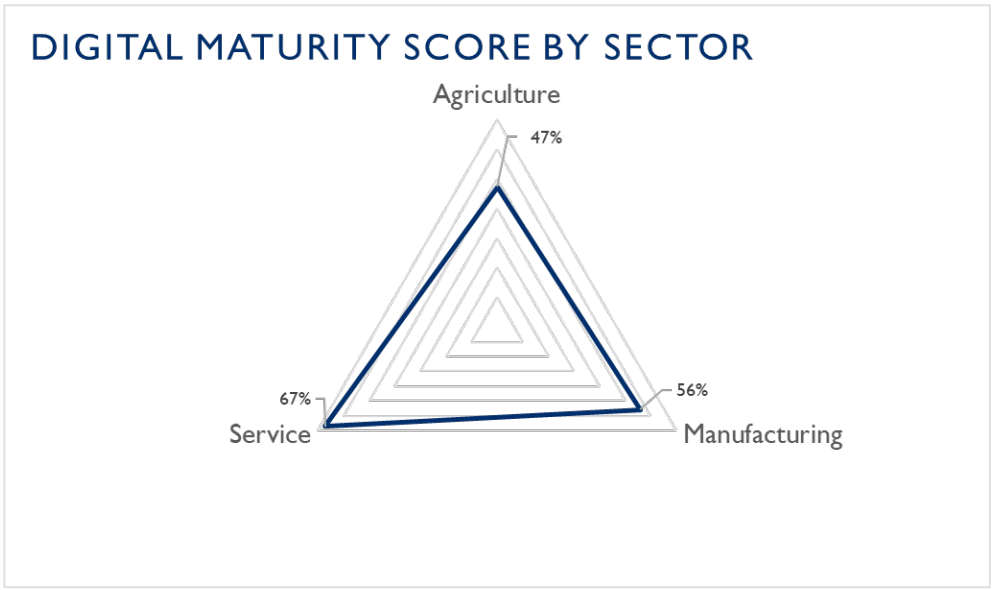


Figure 21: The digital maturity of SMEs by their sector.

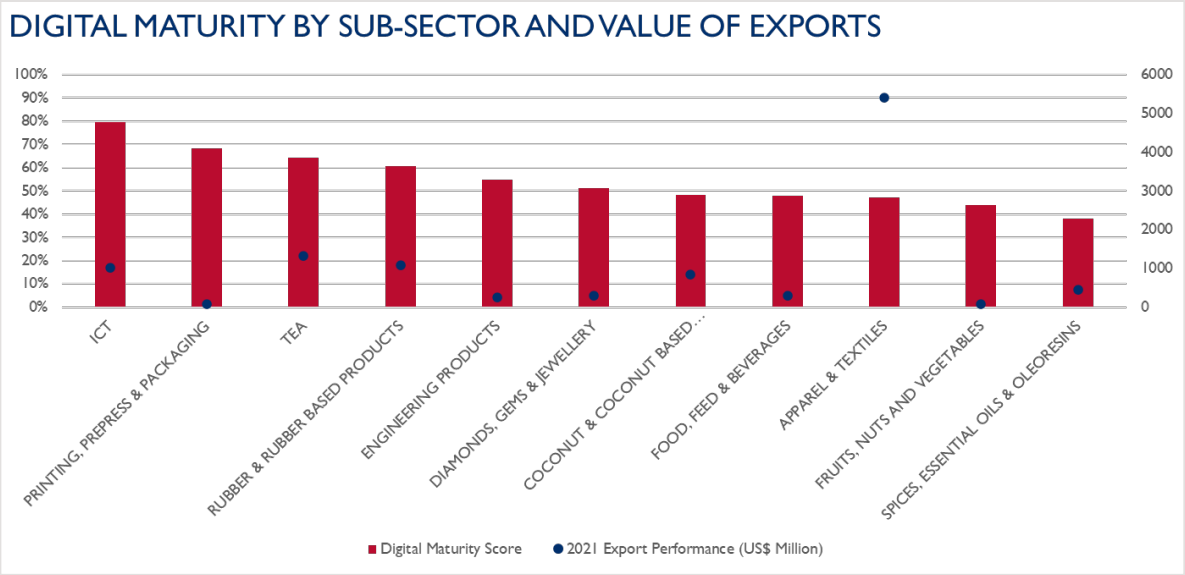


Figure 22: The digital maturity of SMEs with the 2021 export performance for each sub-sector (Source: EDB website).

The average digital maturity score of women-owned/-led enterprises is 53 percent, which does not vary significantly from the average digital maturity score of non-women-owned/-led businesses (56 percent). Most of the women-owned/-led enterprises that participated in this study are involved in the Apparel & Textiles, Spices, Essential Oils & Oleoresins, and Coconut and Coconut based products sub-sectors. The digital maturity score of women-owned/-led businesses was evaluated against each dimension; they have a lower digital maturity score in the Strategy, Human Capital & Culture, and Technology dimensions, as shown in Figure 29.

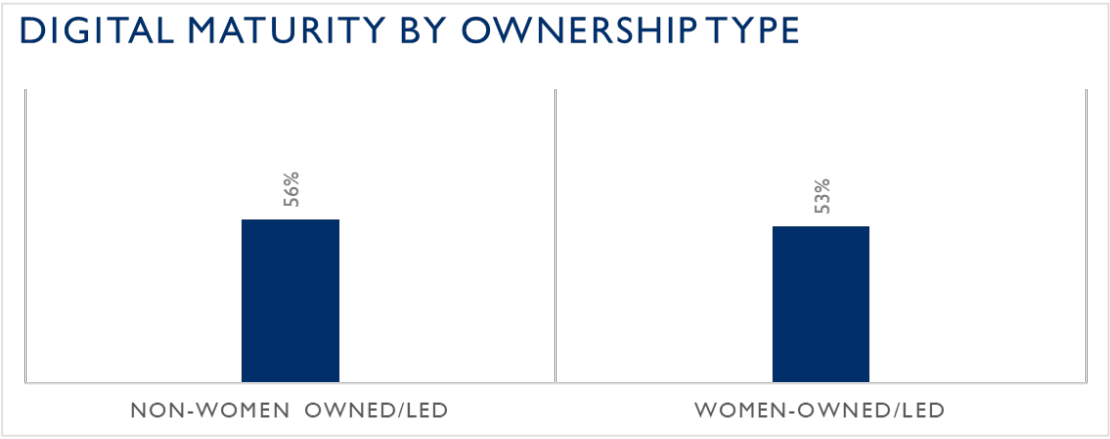


Figure 23: The digital maturity of SMEs for each ownership type.

The geographical distribution of SMEs' digital maturity within the country was assessed to identify trends between Western Province and the other provinces. The findings show that the Western Province, which includes the Colombo, Gampaha, and Kalutara districts, has a higher digital maturity score than all other provinces. This means there is a greater need for regions outside of the Western Province to improve the digital maturity of enterprises.

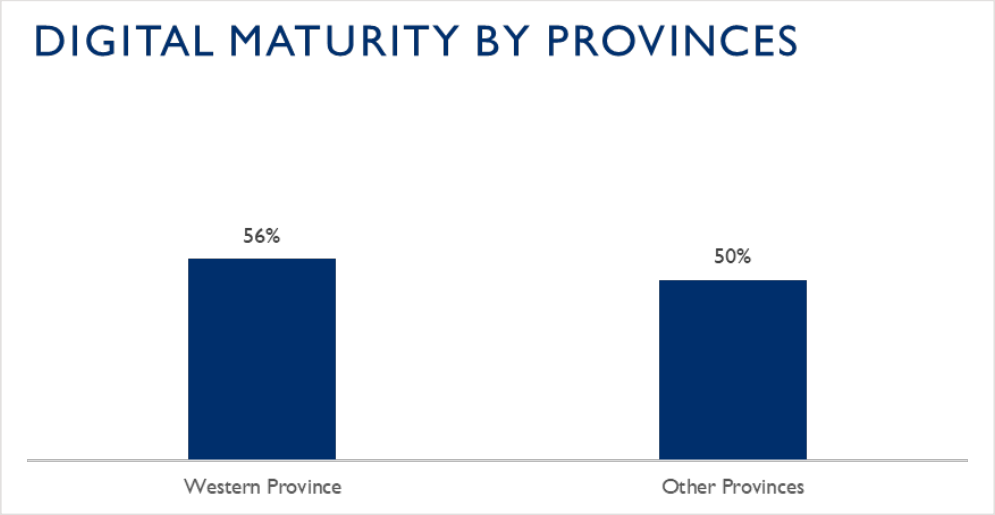


Figure 24: The digital maturity of the Western Province and other provinces.

The survey assessed digital maturity across five dimensions to gather insights into the entire digital ecosystem in which SMEs operate. The survey findings revealed various digital maturity scores for SME exporters across all five dimensions. The Operations dimension has the highest digital maturity score at 68 percent, followed by the Enabling Environment and Human Capital & Culture at 57 percent, then the Technology dimension with 55 percent, and lastly, the Strategy dimension is the least digitally mature with a score of 44 percent.

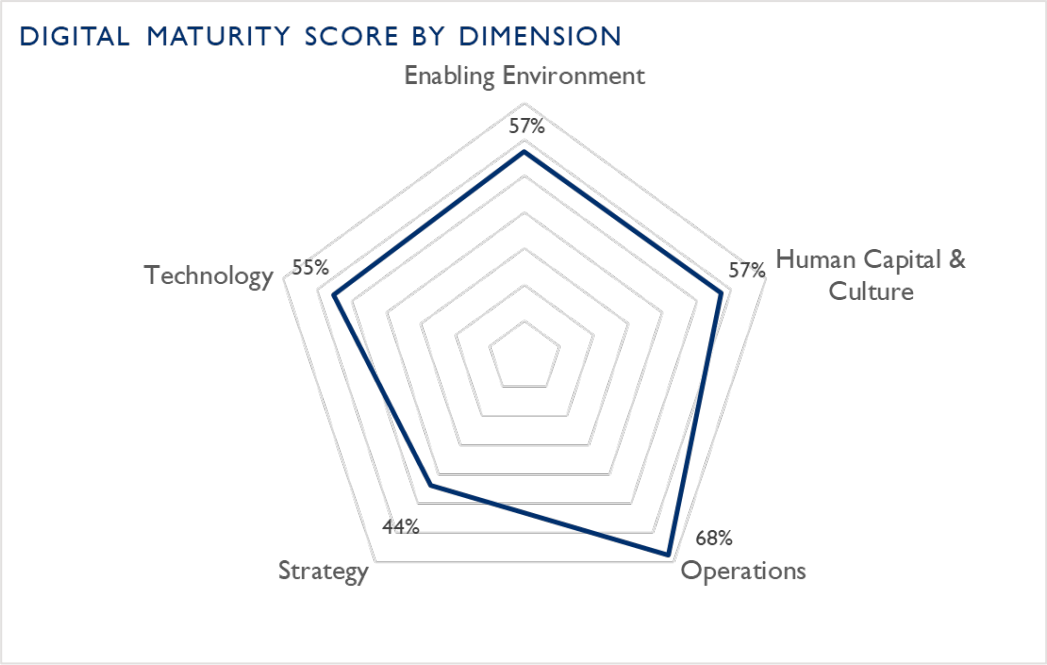


Figure 25: The digital maturity score for each dimension.

Small enterprises have a lower digital maturity score than medium enterprises across all five dimensions. The scores of small and medium enterprises each follow the same trend, with Operations scoring the highest and Strategy scoring the lowest. The largest digital maturity gap is in the Technology and Strategy dimensions. The gap reveals that small enterprises fall far behind the medium enterprises with a digital maturity score of 50 percent compared to 71 percent for Technology and 40 percent compared to 60 percent for Strategy.

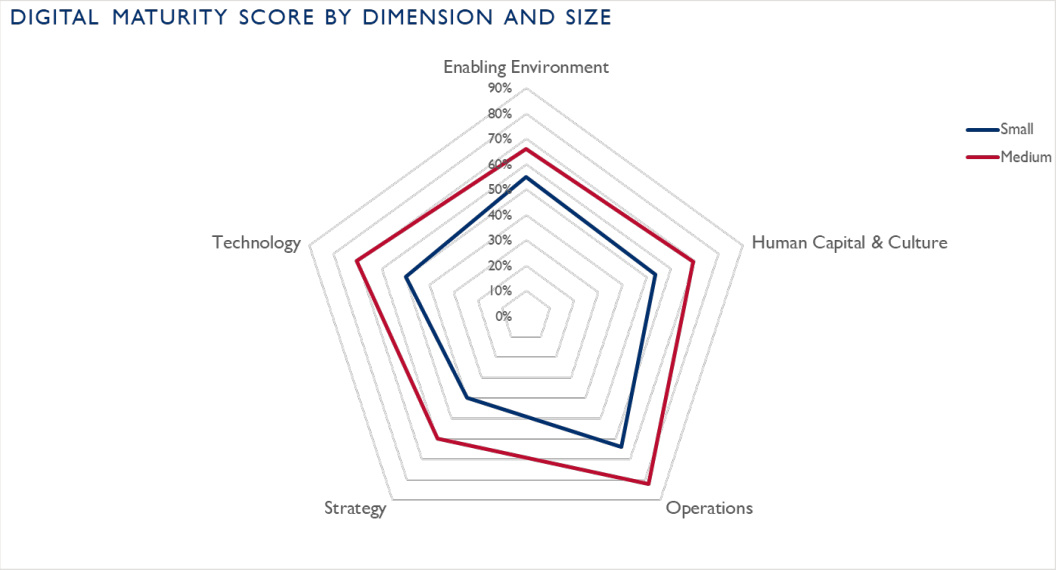


Figure 26: The digital maturity score for small and medium enterprises within each dimension.

When analyzing the digital maturity score of each sector across the dimensions, there are large gaps between the three sectors: agriculture, manufacturing, and service. The gap is sizable between Service and Agriculture sectors. The service sector scores high in the Human Capital & Culture and Operations dimensions but performs poorly in the Strategy dimension. The Agriculture and Manufacturing sectors score high on the Enabling Environment and Operations dimensions. All sectors scored low in the Strategy dimension, with significant gaps between each.

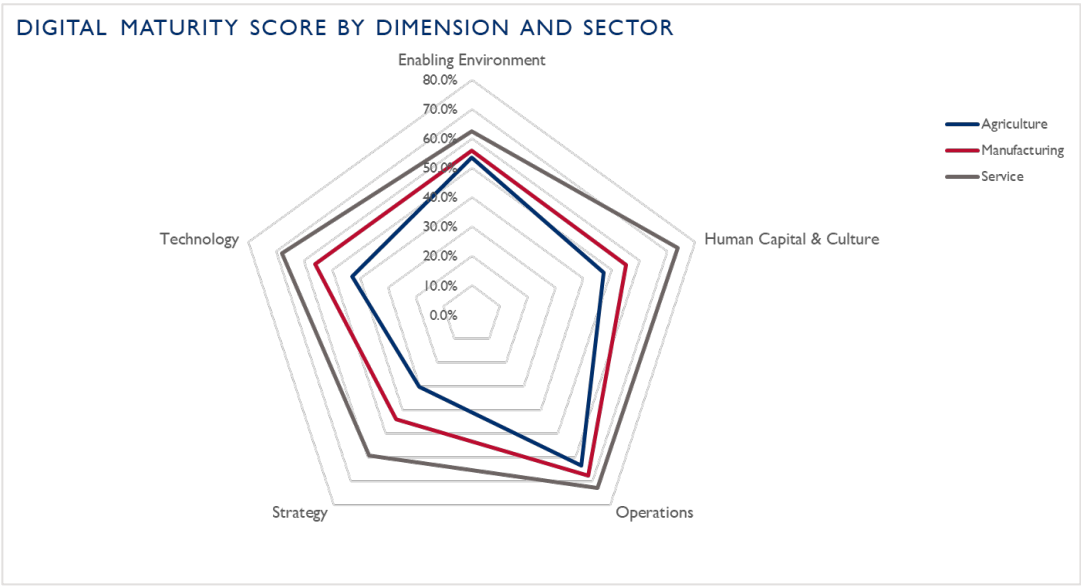


Figure 27: The digital maturity score of each sector within each dimension.

Provinces outside the Western Province had lower digital maturity scores than the Western Province for all dimensions except the Human Capital & Culture dimensions. For this dimension, other provinces and the Western Province had digital maturity scores of 57 percent and 54 percent, respectively. The dimension showing the largest gap between Western Province and others is Technology. In this dimension, the Western Province surpasses the digital maturity of the other provinces with a score of 59 percent compared to 46 percent.

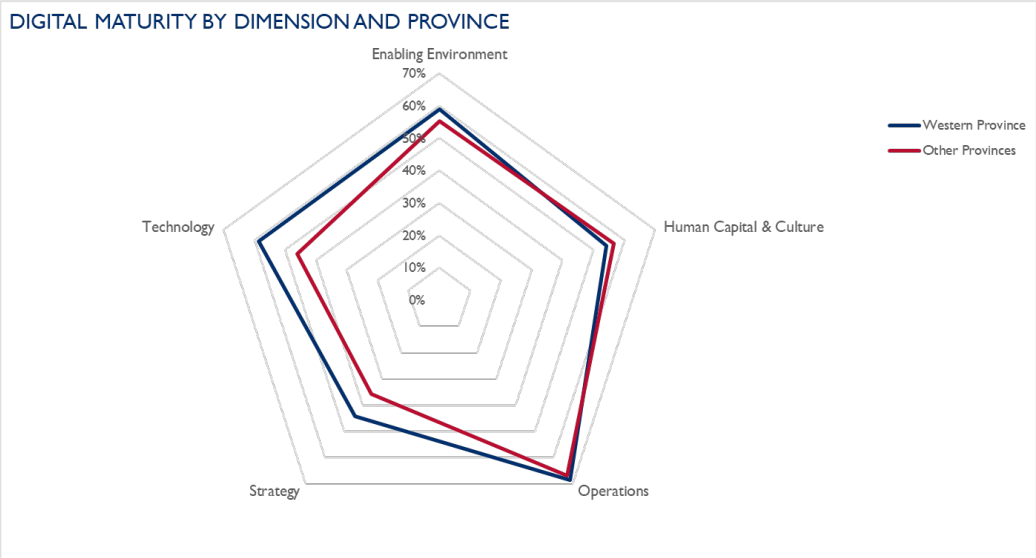


Figure 28: The digital maturity score by dimension and province.

The digital maturity of women-owned/-led enterprises is higher than non-women-owned/-led enterprises for the Enabling Environment and Operations dimensions, but the gap is small. The Strategy dimension has the largest gap between the two ownership types; non-women-owned/-led enterprises have a digital maturity score of 45 percent, and women-owned/-led enterprises have a digital maturity score of 40 percent.

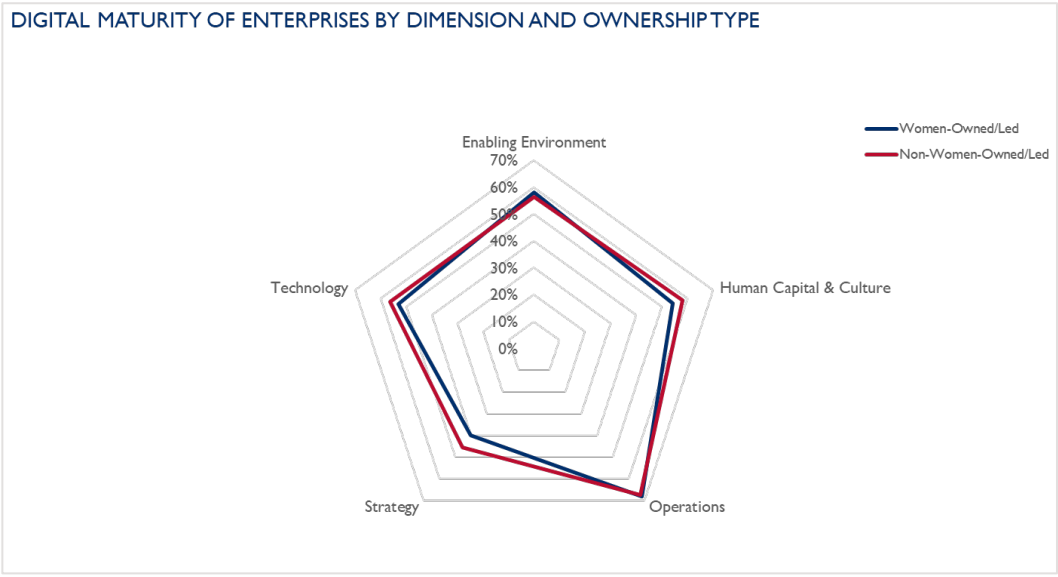


Figure 29: The digital maturity of SMEs organized by ownership type and dimension.

6.2 Dimension Findings

To identify the strengths and weaknesses more easily within each dimension, the heat map below shows the digital maturity of each sub-dimension. The sub-dimensions are colored with a red-yellow-green scale, with red areas representing a low digital maturity and green areas representing a high digital maturity.

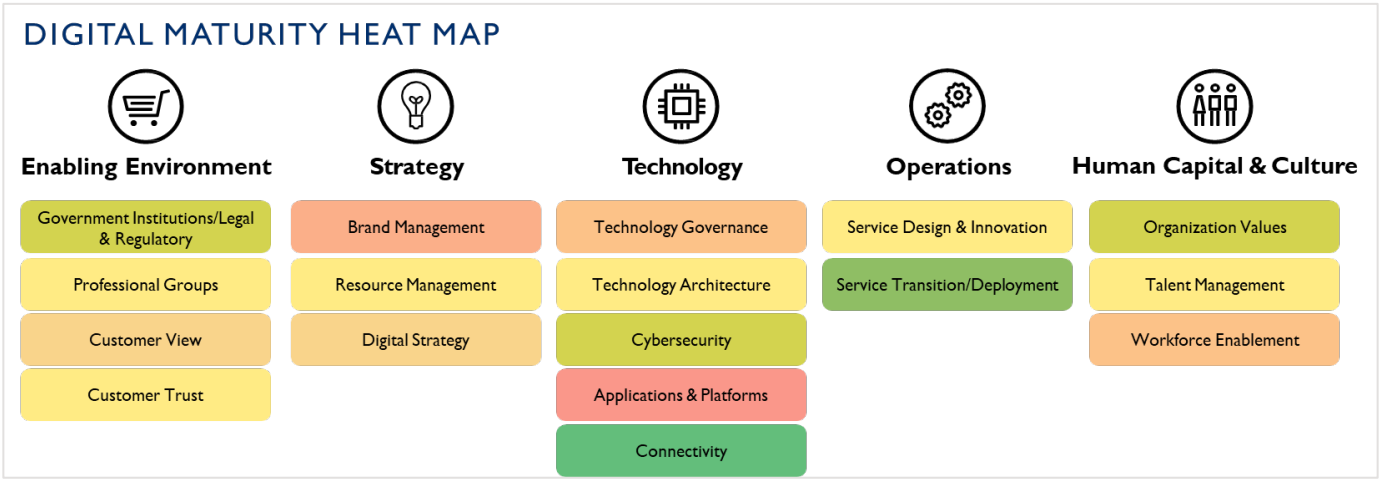


Figure 30: A digital maturity heatmap to identify strengths and weaknesses for each sub-dimension.

Enabling Environment

The Enabling Environment dimension assessed the environment in which SME exporters operate. This included the support they received from the government and trade organizations, the collaboration among SMEs for knowledge-sharing, and the information they received from their customer base. The Enabling Environment consisted of four sub-dimensions: Government Institutions/Legal & Regulatory, Professional Groups, Customer View, and Customer Trust.

The digital maturity of the Enabling Environment dimension across SMEs is 57 percent. The sub-dimension with the highest digital maturity is Government Institutions/Legal & Regulatory (66 percent), and the sub-dimension with the lowest digital maturity is Customer View (49 percent). The key findings for this dimension are:

- SMEs often cannot find the information (resources and organization) they need to navigate their export business, especially in areas outside the Western Province.
- Most SMEs do not have a digital marketing plan to interact with their current customers and/or attract new customers; however, they use social media platforms such as Facebook, YouTube, WhatsApp, Instagram, LinkedIn, and Twitter to market their products and services.

Enabling Environment Sub-Dimensions	Size of the Enterprise		Sector			Ownership		Geography	
	Small	Medium	Manufacturing	Agriculture	Service	Non-Women-owned/led	Women-owned/led	Western Province	Other Province
Government Institutions/Legal & Regulatory (66%)	65%	70%	68%	63%	68%	66%	68%	70%	60%
Professional Groups (59%)	57%	61%	57%	64%	56%	57%	62%	59%	57%
Customer View (49%)	46%	53%	48%	42%	58%	48%	49%	48%	49%
Customer Trust (54%)	49%	58%	50%	46%	66%	52%	52%	54%	59%

Figure 31: A digital maturity heatmap to identify strengths and weaknesses of SMEs within the Enabling Environment sub-dimensions.

Government Institution/Legal & Regulatory sub-dimension assessed whether SMEs know and have access to the relevant laws and regulations governing digital technology. The assessment found that:

- Little more than one-half of the SMEs can find resources, including trade-related regulations that affect their business. Respondents listed Google, Facebook, the Export Development Board (EDB) website, and authority websites related to their sub-sectors as resources to find trade regulation information.
- A few of the laws and regulations that enterprises are aware of related to digital technology, specifically including the Information and Communication Technology Act, Computer Crime Act, and Telecommunication Act.
- About 60 percent of respondents have contacted relevant government organizations/agencies to get additional information and assistance with export and/or digital questions.
- Most enterprises find resources and/or inputs for their products from their regular supplier base and web searches. Medium enterprises have a higher digital maturity score than small enterprises.
- SMEs within the service and manufacturing sectors have a higher digital maturity score than SMEs in the agriculture sector.
- Little difference exists in the scores between women-owned and non-women-owned and led enterprises.
- SMEs in the Western Province have a higher digital maturity score compared to other provinces.

The **Professional Groups sub-dimension** assessed whether SMEs are aware of the existence of the chambers of commerce or similar groups and use the resources they provide. The assessment found that:

- Most respondents said they were unaware that groups such as the chambers of commerce and the industry associations provide resources to assist with exporting.
- The resources that respondents are aware of include trade fairs, seminars, and training (e.g., digital training), as well as funding information (e.g., loans).
- The agriculture sector scores higher (64 percent) than the service (56 percent) and manufacturing (57 percent) sectors.
- Women-owned and -led enterprises perform better than their male counterparts.
- Medium-sized enterprises have a higher score than small-sized enterprises in this sub-dimension.
- Enterprises in the Western Province and the rest of the island score low.

The **Customer View sub-dimension** focused on the customer's experience, their interactions across digital channels (e.g., social media, website), and how SMEs engage with customers to encourage brand loyalty. The assessment found that:

- About 55 percent of respondents use e-commerce platforms like custom platforms, Daraz, and Ikman to engage with their customers.
- For the enterprises that use e-commerce platforms, 82 percent use the data collected to inform proactive customer need management (e.g., product issues, service response time, etc.).
- Seventy-seven percent of SMEs with e-commerce platforms have an inventory list that is accurate and up to date, and 63 percent allow customers to customize products and services they buy (e.g., choose the quantity of an item, the color of an item, etc.).

- Sixty-six percent of SMEs with an e-commerce platform can manage all aspects of the ordering process using their e-commerce platform. However, only 45 percent of SMEs that use e-commerce platforms allow customers to pay for products and/or services on the platform. SME exporters use social media platforms such as Facebook, YouTube, WhatsApp, Instagram, LinkedIn, and Twitter to market their products and services.
- Over 65 percent of respondents do not have a digital marketing plan, and 43 percent do not have a central database for customer data information.
- The agriculture sector and small-sized enterprises have the lowest digital maturity scores in this area.
- The service sector has one of the highest digital maturity scores (58 percent) within this sub-dimension.
- Little difference exists in digital maturity scores between enterprises based on their location or ownership.

Finally, the **Customer Trust sub-dimension** assessed how customer information is handled and secured. The assessment found that:

- Forty-eight percent of SMEs have a physical location (e.g., storefront, warehouse) where sales are conducted, and 44 percent of SMEs conducted sales both online and in a physical location.
- About 57 percent of SMEs have a central database for customer data information.
- For the SMEs that use e-commerce platforms, about 82 percent collect data to inform proactive customer need management (e.g., product issues, service response time, etc.) and create a better experience for the customer.
- About 81 percent of SMEs use the data for analytics to forecast customer behavior and proactively address customer needs.
- Most SMEs (56 percent) do not collect customers' personally identifiable information (PII). PI is any data that could potentially identify a specific individual and should be treated cautiously to protect an individual's information. For SMEs that collect PII, 84 percent have a system to anonymize and protect the data.
- The service sector scores significantly higher than other sectors, with a digital maturity score of 66 percent, whereas manufacturing and agriculture have relatively low digital maturity scores.
- Provinces outside of the Western Province have instilled trust in their customer base with a 59 percent digital maturity score.

Overall, SMEs would benefit from increased access to laws and regulations relevant to their enterprise and information on data privacy to protect customer information. They would also benefit from building connections with professional groups to gain advice and support with export-related matters. To better understand and plan for their customers' needs, enterprises need to be aware of how their customers interact with their websites and social media platforms and adapt accordingly.

Strategy

The Strategy dimension assessed how an SME transforms and/or operates their enterprise to increase their competitive advantage through digital initiatives. The Strategy dimension consisted of three sub-dimensions: Brand Management, Resource Management, and Digital Strategy.

The digital maturity score of the Strategy dimension is 44 percent. The sub-dimension with the highest digital maturity score is Resource Management (50 percent), and the sub-dimension with the lowest digital maturity score is Brand Management (34 percent). The key points for this dimension are:

- The exporters that should focus efforts on their digital brand performance are small enterprises, women-owned/-led businesses, and enterprises located outside of the Western Province
- Half of the SMEs do not use digital channels/methods to generate new leads for their business
- The majority of SMEs have not implemented nor are planning to implement advanced digital technologies into their organizations

Strategy Sub-Dimensions	Size of the Enterprise		Sector			Ownership		Geography	
	Small	Medium	Manufacturing	Agriculture	Service	Non-Women-owned/led	Women-owned/led	Western Province	Other Province
Brand Management (34%)	28%	42%	30%	27%	50%	35%	29%	36%	29%
Resource Management (50%)	45%	59%	49%	37%	67%	52%	46%	56%	38%
Digital Strategy (45%)	39%	56%	46%	29%	60%	47%	41%	50%	36%

Figure 32: A digital maturity heatmap to identify strengths and weaknesses of SMEs within the Strategy sub-dimensions.

The **Brand Management sub-dimension** assessed whether or not SMEs have a process to measure digital brand performance. The assessment found that:

- Most SMEs (67 percent) do not have metrics to measure digital brand performance (e.g., level of engagement with e-commerce and/or social media platforms).
- SMEs within the service sector have a higher digital maturity score than SMEs within the manufacturing and agriculture sectors.
- Medium enterprises have a higher digital maturity score than small enterprises.
- Women-owned/-led enterprises have a significantly lower digital maturity score (29 percent) than male-owned/led enterprises (35 percent).
- SMEs within the Western Province have a higher digital maturity score of 36 percent compared to other provinces (29 percent).

The **Resource Management sub-dimension** assessed the ability of SMEs to generate leads that create new business opportunities, and the results are listed below.

- Half of SMEs use digital channels/methods to generate new business leads.
- The service sector has the highest digital maturity score (67 percent) within this sub-dimension, followed by manufacturing (49 percent) and agriculture (37 percent).
- Medium enterprises have a higher digital maturity score than small enterprises.
- Women-owned/-led enterprises have a lower digital maturity score (46 percent) than male-owned/led enterprises (52 percent).
- There is almost a 20-percent difference in digital maturity score between SMEs in the Western Province (56 percent) and other provinces (38 percent).

The **Digital Strategy sub-dimension** focused on digital transformation governance and business strategies encompassing digital technology adoption. The results for this sub-dimension are listed below.

- Only 34 percent of SMEs have implemented digital transformation policies (e.g., oversight of the business strategy that connects business with technology platforms).
- Half of SMEs have a business plan that incorporates technology adoption.
- Fifty-four percent of SMEs have a person in charge of leading digital transformation.

- About 40 percent of SMEs are not currently implementing nor planning to implement advanced digital technologies; 34 percent of SMEs are planning to implement advanced digital technologies, and 26 percent of SMEs are currently implementing advanced digital technologies.
- Medium enterprises have a higher digital maturity score in this sub-dimension than small enterprises.
- The service sector has the highest digital maturity score of 60 percent, followed by the manufacturing sector (46 percent) and the agriculture sector (26 percent).
- Women-owned/-led SMEs fall behind the men-owned/-led SMEs with a digital maturity score of 41 percent.
- SMEs in the Western Province have a digital maturity score of 50 percent compared to other provinces (36 percent).

To help SME exporters compete in the global market, businesses must be willing to integrate advanced digital technologies into their operations to improve product manufacturing and service delivery. There is an opportunity for enterprises to collect information on their digital brand performance, customize their digital channels for more customer engagement, and create new business opportunities.

Technology

The technology component of digital maturity is much broader than the applications themselves. Specific attention must also be allocated to governance and security, architecture and integration, and connectivity. The Technology dimension consisted of five sub-dimensions: Technology Governance, Technology Architecture, Cybersecurity, Applications & Platforms, and Connectivity.

The digital maturity score of the Technology dimension is 55 percent. The sub-dimension with the highest digital maturity score is Connectivity (100 percent), and the sub-dimension with the lowest digital maturity score is Applications & Platforms (16 percent). The key points for this dimension are:

- Most SMEs do not follow technology governance or standardized methods to implement, manage, and monitor information technology.
- SMEs use platforms such as enterprise resource planning (ERP) and customer relationship management (CRM); however, most SMEs do not use cloud technology to store their data.
- The most common digital technologies used include the IoT and ML/AI.
- All SMEs have access to the internet.

Technology Sub-Dimensions	Size of the Enterprise		Sector			Ownership		Geography	
	Small	Medium	Manufacturing	Agriculture	Service	Non-Women-owned/led	Women-owned/led	Western Province	Other Province
Technology Governance (35%)	26%	53%	38%	17%	52%	37%	32%	45%	18%
Technology Architecture (52%)	48%	69%	23%	44%	69%	56%	55%	61%	46%
Cybersecurity (62%)	55%	76%	63%	49%	74%	64%	59%	69%	50%
Applications & Platforms (16%)	12%	22%	14%	3%	33%	16%	14%	19%	9%
Connectivity (100%)	100%	100%	100%	100%	100%	100%	100%	100%	100%

Figure 33: A digital maturity heatmap to identify strengths and weaknesses of SMEs within the Technology sub-dimensions.

The **Technology Governance sub-dimension** assessed the presence of a formal technology governance framework and the use of international standards for technology best practices. The results for this sub-dimension are listed below.

- Fifty-four percent of SMEs follow standardized methods to implement, manage and monitor information technology.
- Most SMEs (74 percent) do not reference international best practices in their technology implementation (such as Global ISO Standards - ISO 27000).
- Medium enterprises have a higher digital maturity score of 53 percent compared to small enterprises.
- The service sector has the highest digital maturity score (52 percent), followed by the manufacturing sector (38 percent) and the agriculture sector (17 percent).
- Women-owned/-led SMEs have a lower digital maturity score than men-owned/led SMEs
- The Western Province is far ahead of other provinces, with a digital maturity score of 45 percent compared to 18 percent.

The **Technology Architecture sub-dimension** focused on the ability of SMEs to make configurations for applications to meet business requirements. It also included questions about cloud technology and cloud infrastructure. The results for this sub-dimension are listed below.

- Sixty-seven percent of SMEs use and accept digital payments (e.g., online banking). The most common digital payment platforms are those provided by the Bank of Ceylon (BOC), Commercial Bank (CBC), and Hatton National Bank (HNB).
- Approximately 63 percent of SMEs use applications to meet their business needs. SMEs' main applications are ERP, CRM, and database services.
- Forty-nine percent of SMEs use cloud technology to store their data, and of these SMEs, 89 percent confirmed that the cloud could be accessed across multiple devices within the enterprise. Also, about 52 percent of SMEs use on-premises data centers for data storage.
- Medium enterprises have a significantly higher digital maturity score (69 percent) than small enterprises (48 percent).
- The service sector has the highest digital maturity score (69 percent), followed by the agriculture sector (44 percent) and then the manufacturing sector (23 percent).
- Women-owned/-led enterprises have a digital maturity score of (55 percent), which is very close to men-owned/-led enterprises (56 percent).
- The Western Province is far ahead of other provinces, with digital maturity scores of 61 percent and 46 percent, respectively.

The **Cybersecurity sub-dimension** assessed the ability of SMEs to monitor systems and components for malicious activity, embed security into the design and deployment of technology, and protect the enterprise's systems from harm. The results for this sub-dimension are listed below.

- Most SMEs (58 percent) do not follow security standards to develop and build secure software.
- Fifty-seven percent of SMEs do not have an individual or team responsible for cybersecurity, but 51 percent can detect an intrusion into their company system.
- An overwhelming 88 percent of SMEs have confirmed that their enterprise has suffered from a cyberattack, which included a majority experiencing one to three attacks in the last three years.
- Most SMEs (87 percent) use passwords to restrict data from unauthorized users.

- Medium enterprises have a significantly higher digital maturity score (76 percent) than small enterprises (55 percent).
- The service sector has the highest digital maturity score (74 percent), followed by the manufacturing sector (63 percent) and then the agriculture sector (49 percent).
- Men-owned/-led enterprises have a higher digital maturity score compared to women-owned/-led enterprises.
- The Western Province is ahead of other provinces (50 percent) with a digital maturity score of 69 percent.

The **Applications & Platforms sub-dimension** captured SMEs' use of emerging technologies such as the IoT and blockchain in SMEs' operations. The results for the sub-dimension are:

- Most SMEs (79 percent) do not use digital technologies in their operations.
- For the 21 percent that uses digital technologies, the most popular are the IoT, ML, and AI, followed by blockchain. Robotics process automation (RPA), 3D computing, and edge Computing are used less.
- Medium enterprises use more digital technologies in their operations than small enterprises.
- The service sector has a much higher digital maturity score (33 percent) compared to the manufacturing (14 percent) and agriculture sectors (3 percent).
- Women-owned/-led enterprises are slightly behind men-owned/-led enterprises with a score of 14 percent.
- The Western Province is ahead of other provinces (9 percent) with a digital maturity score of 19 percent.

The **Connectivity sub-dimension** assessed if SMEs have access to the Internet and, if so, what type of connection they have. The results for the sub-dimension are:

- Most SMEs have access to 4G internet speed, and a small number of enterprises (19 SMEs) have access to a 5G connection
- 54 percent of SMEs have a fiber optic connection, 33 percent have an ADSL connection, and 4 percent have a leased line connection
- SMEs access the internet at their enterprise using a laptop (54 percent), desktop (31 percent), and mobile devices (13 percent)
- The digital maturity scores are the same across all firm characteristics since all respondents have access to the Internet

The results indicate that resources should be readily available for enterprises embarking on a technology implementation to build secure and sustainable solutions. Also, more SMEs should understand emerging technologies and specific applications relevant to their business operations.

Operations

The Operations dimension assessed SMEs' ability to evolve processes and tasks using digital technologies to drive strategic management and enhance business efficiency and effectiveness. This dimension includes two sub-dimensions: Service Design & Innovation and Service Transition/Deployment.

The Operations dimension has a digital maturity score of 68 percent, which is the highest score across all dimensions. The Service Transition/Deployment sub-dimension has a higher digital maturity score (83

percent) than the Service Design & Innovation sub-dimension (53 percent). The key points for this dimension are:

- There is an opportunity for SMEs to assess their existing processes and identify innovative ways to deliver their products or services.
- Most SMEs can track their products across the production and delivery cycle.

Operations Sub-Dimensions	Size of the Enterprise		Sector			Ownership		Geography	
	Small	Medium	Manufacturing	Agriculture	Service	Non-Women-owned/led	Women-owned/led	Western Province	Other Province
Service Design & Innovation (53%)	45%	64%	52%	47%	58%	52%	52%	53%	50%
Service Transition/Deployment (83%)	81%	88%	84%	75%	88%	83%	84%	83%	84%

Figure 34: A digital maturity heatmap to identify strengths and weaknesses of SMEs within the Operations sub-dimension.

The **Service Design & Innovation sub-dimension** reviewed whether SME's operations and processes have been optimized. The results for the sub-dimension are:

- About 52 percent of SMEs have assessed existing processes and procedures to identify a more effective and/or innovative way to deliver services or products.
- Medium enterprises have a larger digital maturity score (64 percent) than small enterprises (45 percent).
- The service sector has a high digital maturity score (58 percent), followed by the manufacturing sector (52 percent) and the agriculture sector (47 percent).
- Women-owned/-led and men-owned/-led enterprises have the same digital maturity score of 52 percent.
- Western Province has a slightly higher digital maturity score compared to other provinces.

The **Service Transition/Deployment sub-dimension** assessed if SMEs' supply chain operations are flexible and can respond to changes promptly. The results for the sub-dimension are:

- Most SMEs (84 percent) can track their products across the production and delivery cycle.
- Medium enterprises have a higher digital maturity score of 88 percent.
- The service sector has a higher digital maturity score (88 percent) compared to the manufacturing (84 percent) and agriculture (75 percent) sectors.
- Women-owned/-led enterprises (84 percent) score slightly higher than men-owned/-led enterprises (83 percent).
- Provinces outside the Western Province have similar digital maturity scores (84 percent) to the Western Province (83 percent).

The results imply a strong communication network between SME exports and their suppliers. They also reveal the need to integrate more innovative thinking and processes into SMEs' operations.

Human Capital & Culture

The Human Capital and Culture dimension focused on SMEs' ability to define and develop an organizational culture with governance and talent processes to support digital maturation and the flexibility to achieve growth and innovation objectives. The Human Capital and Culture dimension has three sub-dimensions: Organizational Values, Talent Management, and Workforce Enablement.

The digital maturity score of the Human Capital and Culture dimension is 57 percent. The sub-dimension with the highest digital maturity score is Organizational Values (66 percent), and the lowest digital maturity score is the Workforce Enablement sub-dimension with a score of 35 percent. The key points for this dimension are:

- Most SMEs provide a clear vision for the enterprise and support a digital culture through incentivization and leadership behaviors.
- SMEs are not actively keeping track of their employees' skills and certifications to provide trainings and upskill their current employees.

Human Capital & Culture Sub-Dimensions	Size of the Enterprise		Sector			Ownership		Geography	
	Small	Medium	Manufacturing	Agriculture	Service	Non-Women-owned/led	Women-owned/led	Western Province	Other Province
Organizational Values (66%)	59%	75%	63%	58%	78%	66%	62%	65%	65%
Talent Management (58%)	72%	63%	53%	44%	72%	56%	53%	57%	52%
Workforce Enablement (35%)	27%	49%	33%	16%	63%	38%	28%	40%	25%

Figure 35: A digital maturity heatmap to identify strengths and weaknesses of SMEs within the Human Capital & Culture sub-dimensions.

The **Organizational Values sub-dimension** assessed the behaviors of leaders within an organization to understand if they align with the organization's strengths and current circumstances. Also, this sub-dimension looked at an organization's existing culture to understand if digital innovation is encouraged. The results are listed below.

- Sixty-two percent of SMEs have defined a core vision, desired traits, and core characteristics needed in a digital culture.
- Most SMEs (67 percent) incentivize employees to innovate with monetary or other compensation.
- Fifty-eight percent of SMEs allow employees to work virtually, and 71 percent of SMEs provide resources to facilitate collaboration with other partners virtually.
- Medium enterprises have a higher digital maturity score (75 percent) than small enterprises (59 percent).
- The service sector has a large digital maturity score of 78 percent, followed by the manufacturing (63 percent) and agriculture (58 percent) sectors.
- Women-owned/-led enterprises fall below men-owned/led enterprises with a digital maturity score of 62 percent.
- All of the provinces have the same digital maturity score of 65 percent.

The **Talent Management sub-dimension** assessed the ability of SMEs to identify the skills they need to achieve their digital strategy and understand the competencies of their workforce. Below are the findings for this sub-dimension.

- SMEs' most popular digital skills within their organizations are social media, data analysis, digital marketing, and web analytics. Eighty-seven SMEs said they lack digital skills within their organization.
- Digital skills that SMEs are looking for include digital marketing, social media, data analytics, web analytics, and software development. Fifty SMEs said that they are not looking for any digital skills.
- SMEs' main challenge in obtaining and/or hiring for digital skills is the financial aspect of paying higher salaries. Also, the size of their business is not big enough, and they can afford to hire

additional employees. SMEs found it difficult to find people with the right skills, knowledge, and experience in digital skill sets

- Most SMEs (61 percent) do not have an updated record of employees' digital skills, certifications, and educational backgrounds.
- About 58 percent of SMEs train employees to learn digital skills they do not currently possess and update their existing skills.
- Small enterprises have a higher digital maturity score compared to medium enterprises.
- The service sector has a large digital maturity score of 72 percent, followed by the manufacturing (53 percent) and agriculture (44 percent) sectors.
- Men-owned/-led enterprises lead women-owned/-led enterprises with a digital maturity score of 56 percent.
- Western Province has a higher digital maturity score of 57 percent compared to other provinces with a score of 52 percent.

The **Workforce Enablement sub-dimension** assessed whether SMEs have a workplace that supports digital productivity. The results for this sub-dimension are listed below.

- Most SMEs (65 percent) do not access or encourage employees to access external educational resources on digital.
- SMEs that do access external resources listed seminars (ICT, Zoom, WhatsApp), trainings (software, engineering, telecom), and educational resources such as online courses, scholarships, and certifications.
- Small enterprises fall far below medium enterprises, with a digital maturity score of 27 percent compared to 49 percent.
- The service sector's digital maturity score (63 percent) is largely above the agriculture sector's digital maturity score (16 percent).
- Men-owned/-led SMEs have a higher digital maturity score compared to women-owned/-led SMEs.
- SMEs within the Western Province have a digital maturity score of 40 percent compared to those outside the Western Province (25 percent).

An enterprise's digital culture is important to help employees and the business grow into a digitally mature organization. There are opportunities to provide educational resources and certification trainings to help upskill employees and support digital maturation.

6.3 Recommendations

There are several opportunities for GSL and SME exporters to increase their digital maturity and strengthen the digital ecosystem in Sri Lanka. This section outlines recommendations for specific actions and general guidance for digital initiatives based on the above findings. Given the low digital maturity scores across all enterprise characteristics (size, sector, geographic location, and ownership type), the recommendations below for SMEs could be applied generally to all enterprises. The next section provides a detailed explanation of each item in the table.

Table 1: Recommendations for GSL and SMEs

Recommendation	Impact	Considerations
1 **Increase awareness of the Sri Lanka Trade Information Portal website** *Enabling Environment (Government Institutions/Legal & Regulatory)*	Increase access to resources	The Sri Lanka Trade Information Portal provides exporting resources; however, most SMEs surveyed did not reference the portal as a resource for trade-related regulations. The GSL could work with organizations, such as the chambers of commerce and donors, to ensure they are promoting the use of this site and directing SMEs to export resources. **Proposed Owner:** GSL
2 **Integrate automated processes into the Sri Lanka Trade Information Portal website** *Enabling Environment (Government Institutions/Legal & Regulatory)*	Improve user experience	The GSL could work with donor organizations to enhance the Sri Lanka Trade Portal with advanced search features and automated workflows to provide a better user experience. An RPA chatbot could help users find information and upload documents, eliminating manual process steps. **Proposed Owner:** GSL
3 **Develop a Digital Marketing Handbook** *Enabling Environment (Customer View)*	Engage existing and new customers and partners	A handbook provided by GSL would help SMEs define their digital marketing goals and focus on the most important opportunities to engage with customers and partners (e.g., website advertising, email marketing, social media content). **Proposed Owner:** GSL
4 **Establish User Experience (UX) metrics for e-commerce websites** *Enabling Environment (Customer View and Customer Trust)*	Understand customer interactions and needs	UX metrics are used to measure, compare, and track the user experience of a website over time. SMEs could utilize government and other resources to choose metrics that reflect their business objectives. A few metrics that help SMEs better understand their customers are page views, conversions, average order value, etc. **Proposed Owner:** SMEs
5 **Webinars and trainings for SMEs to utilize advertising features** *Strategy (Brand Management)*	Attract new customers and partners	Companies like Google, Facebook, and LinkedIn offer built-in advertising features through their platforms. Since most SMEs are already using these platforms, the GSL, in collaboration with CCC and donors, could organize a series of webinars and trainings to highlight the benefit of using digital marketing and how SMEs can utilize the advertising features available with the platforms. **Proposed Owner:** GSL

6 Emerging technology showcase *Technology (Applications & Platforms)*	Increase access to digital technologies	The GSL could work with chambers of commerce and donors to organize a showcase that could provide innovative boot camps to help SMEs understand exporter-specific use cases for emerging technologies such as cloud, IoT, AI/ML, and blockchain. The boot camps could offer learning materials and demonstration environments for SMEs to familiarize themselves with the technology. To increase SMEs' access to digital technologies, the showcase could also identify and feature vendors that SMEs could partner with to implement solutions. **Proposed Owner:** GSL
7 Technology implementation framework guide *Technology (Technology Governance) and Strategy (Digital Strategy)*	Increase awareness of best practices	With donor support, a guide could be developed by GSL for SMEs to utilize when beginning a technology implementation. This guide could include guidance for their strategy (business and technology strategy), compliance (e-laws and regulations), governance, security (cybersecurity), and adoption and communication. It could be used to ensure best practices are followed for a successful implementation. **Proposed Owner:** GSL
8 SME digital open forum *Operations (Service Design & Innovation)*	Increased digital inclusion and innovation	The GSL could collaborate with donors to create an ecosystem platform for SMEs, partners, and vendors to connect and collaborate on digital practices and operations and share success stories. This platform could include a forum specifically for women-owned/-led SMEs to increase digital inclusion among women. The collaboration among SMEs would spark ideas for new and effective ways to deliver their products/services. **Proposed Owner:** GSL
9 SME Digital Education Toolkit *Human Capital & Culture (Talent Management and Workforce Enablement)*	Increased digital literacy	The GSL, in collaboration with donors, could develop an online toolkit that helps SMEs assess the current digital knowledge/skills of their organization through a short survey and then provide resources (certifications, educational materials, trainings, etc.) to enhance their knowledge and skills. This would provide customized resources for each SME and their employees. **Proposed Owner:** GSL

Detailed Recommendations

The digital ecosystem examples provided below are from nations that follow leading practices and the recommendations were tailored to Sri Lanka.

1. Increase awareness of the Sri Lanka Trade Information Portal website

The Department of Commerce implemented the Sri Lanka Trade Information Portal to provide an accessible, logical, and helpful gateway for traders to access important regulatory and procedural information needed to export, import, and transit. The portal provides information on trade, including laws and regulations, licensing and permit requirements, forms relating to procedures, and information relating to international, regional, and bilateral trade agreements. During the assessment, SMEs were asked if they could find the resources, including trade-related regulations that affect their export business, and if so, where they access this information. Most SMEs relied on Google searches, the EDB website, and authority websites related to their sub-sectors to find the needed information. None of the SMEs specifically mentioned the Sri Lanka Trade Information Portal. Thus, it seems there is a lack of awareness among SMEs for which this resource is available.

To increase awareness, the Sri Lanka Trade Information Portal could be advertised and linked on other websites such as the Export Development Board - Exporters page and chambers of commerce/industry associations. This will benefit SMEs because it will direct them to a one-stop point for information relating to importing into and exporting from Sri Lanka.

2. Integrate automated processes into the Sri Lanka Trade Information Portal website

The Sri Lanka Trade Information Portal contains a wide range of useful information for exporters. The webpage includes an advanced search option for trade information to look up commodities and tariffs, measures, standards, and procedures. The search feature can be enhanced by integrating a chatbot leveraging conversational AI to improve advanced search capabilities. Like the EDB Online Assistant, the chatbot can direct users to specific pages within the website to help them better navigate and find information.

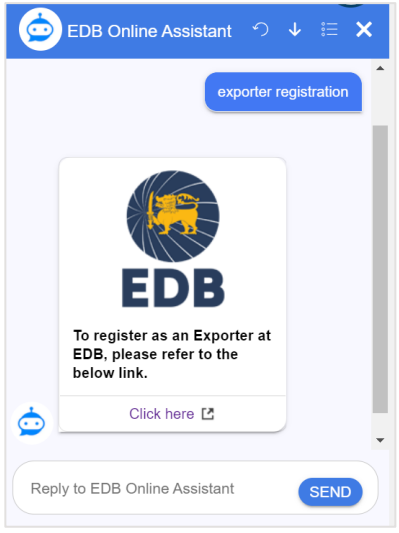


Figure 36: The EDB Online Assistant directs users to a link where they can find the information they are seeking.

The Sri Lanka Trade Information Portal also provides step-by-step procedures to capture the detailed trade procedures for each type of operation (e.g., export or import) and product. The procedures

include where to visit, what forms to complete, the cost of application, and the expected time frame. This feature enhances the transparency and predictability of trade procedures for SME exporters. However, Sri Lanka currently does not have a mechanism to submit import and export-related forms and applications for review and approval on a single platform. A single submission platform, like the proposed National Single Window, would make the process of submitting trade-related documents quick and convenient for exporters.

A successful case study highlighting the applications and benefits of a single submission platform is the Singapore Networked Trade Platform, a one-stop trade and logistics ecosystem that supports digitalization and connects businesses in Singapore and abroad. The platform allows users to manage their documents in an online cloud-based repository and share them quickly and securely with government organizations. It also serves as a gateway to handling trade declarations and related matters with Singapore Customs and Competent Authorities. The Singapore Networked Trade Platform provides the foundation for businesses to trade innovatively and streamline processes.

3. Develop a Digital Marketing Handbook for SMEs

Most of the surveyed SMEs do not have a digital marketing plan which is important to strategize how they can engage existing and new customers and partners. A handbook is essential to help SMEs focus on the most important opportunities and develop relevant content to engage with customers and partners. Small firms, specifically, would benefit greatly from resources to guide the development of a digital marketing plan.

The GSL and donors could release a Digital Marketing Handbook to aid SMEs in developing a digital marketing plan. The first step in developing a digital marketing plan is for SMEs to define their business scope. This includes establishing who their customers are, what products they are selling and in which geography, and through what channels (e.g., online, storefront, etc.). SMEs then need to define their objectives which influence the key performance indicators that will be used to measure the success of their digital marketing plan. SMEs also need to identify a cross-functional team, with members from several parts of the organization, who will implement their digital marketing plan. They should understand the technology used in the digital marketing plan and establish a budget. By identifying risks and dependencies, SMEs can proactively plan their mitigation efforts. The digital marketing plan should be revisited frequently to ensure it is still relevant to their business goals and market trends. (Shen, S., Lowndes, M., 2021)

4. Establish User Experience (UX) metrics for e-commerce websites

SMEs would benefit from collecting consumer data to help their enterprise understand who their end customers are, what they value, how they act, and what they think and feel after a purchase or recent interaction. Customer data can provide powerful insights into the consumer's needs and create a competitive advantage for SMEs, especially small firms.

In this regard, consumer connectivity is important—that is, a supply chain's ability to digitally sense, motivate, and serve consumers, giving them exactly what they want at any time and place. Three types of consumer data power it:

- **Sentiment:** What consumers say they will do ("I would really like product X"; "I want this type of feature"; "I am looking for something in this price range"; "I like to shop in this channel")
- **Behavior:** What consumers actually do (shopping behavior, impressions, brand interactions, return rate, purchase price)

- **Social:** How consumers react to and share their experiences (reviews and ratings, referrals, personal discussions, social media comments)

This data can be collected from built-in web analytics tools or directly from customers. The top global e-commerce websites like Shopify, Wix, and Square Online, to name a few, incorporate customer management software into their applications. They make it easy to view customer profiles to learn more about their shopping habits and provide analytical dashboards for sales, product growth, and website traffic. By establishing metrics for tracking customers' needs and website growth, SMEs can adapt their products and services to continue growth.

5. Webinars and trainings for SMEs to utilize advertising features

There is an opportunity for SMEs to generate new leads for their business by utilizing the built-in advertising features on platforms they are already using, such as Google, Facebook, and LinkedIn. Each platform has all-in-one services to build and manage advertising campaigns with flexible budgets. They also advise on designing and optimizing campaigns based on an enterprise's objectives. Specific details for each platform are listed below.

- Google Ads is a Google-developed online advertising platform where advertisers bid to display brief advertisements, service offerings, product listings, or videos to web users. It can place ads both in the results of search engines like Google Search and on non-search websites, mobile apps, and videos. Enterprises can set a monthly budget that can be adjusted or paused at any time. Google Ads also provides reports, insights, and ongoing tips so enterprises can track their progress and make their ads even more successful.
- Ads Manager is Facebook's platform for creating new campaigns and tracking performance. It provides a step-by-step guide on creating an advertisement that aligns with an enterprise's goal and audience. Enterprises can set a daily or lifetime budget and the time period during which they want to run their ad. Ads Manager provides insights into which ads perform best on their platforms. It is easy for customers to create, publish, and purchase ads across various platforms like Facebook, Instagram, Messenger, and Audience Network.
- Campaign Manager is LinkedIn's advertising platform where enterprises can set up an account, run campaigns, and control their budget. Enterprises can customize a campaign's objective, audience, ad format, placement, budget, and schedule. It also features conversion tracking to understand how ads drive business (e.g., lead-generation).

To help SMEs understand the value of the built-in advertising features and their use, the GSL can work with CCC and donors to organize a series of webinars to highlight the impact of digital marketing and how to use features on specific platforms such as Google or Facebook. The webinars could include use cases for small firms to demonstrate the applicability and feasibility for firms of all sizes. They could also highlight firms of different ownership types to reach enterprises with women owners and leaders.

A similar program demonstrating the successful collaboration between GSL and industry partners is Facebook's Digital Saubhagya program in Sri Lanka. In 2021, the GSL worked with various trade bodies to support Facebook's online sessions to raise awareness about the best social media practices for business. A Facebook live event was also organized to showcase local entrepreneurs. The program developed case studies on how small and medium businesses use digital platforms effectively ("Facebook Helps Sri Lankan Small Businesses Benefit from the Power of Digital Tools.", 2021). A similar approach could be used when developing webinars on digital marketing examples/best practices and trainings on using platforms' built-in advertising features.

6. Emerging technology showcase

The GSL could facilitate a series of Innovation Bootcamps, led by SMEs and partners, to offer insights about emerging technologies. Each 90-minute boot camp will offer additional learning materials and, where possible, a sandbox where participants can work with the new technologies and even develop prototypes. The boot camps can also feature vendors with which SMEs could potentially partner to implement technologies, increasing access to digital technologies for small and medium enterprises. All sessions could be recorded and shared on a single platform to provide on-demand learning materials accessible to all SMEs, including those outside the Western Province.

An example is the e-Estonia Briefing Centre, which was designed for experiencing everything "e-Estonia" has to offer. They host events at the center and online for government institutions, companies, and media to get an overview of e-Estonia's best practices and build links to leading IT service providers and state experts to support digitalization plans. Their services range from 30 to 90 minutes briefing sessions to a one- to three-day deep-dive experience and workshop. The Estonian government and experts in the IT industry also lead an online event series on diverse topics on digitalization.

7. Technology implementation framework guide

When embarking on a digital transformation, SMEs need to understand and plan for the risks involved in technology implementation. A technology implementation framework defines the ways and methods an organization can implement, manage and monitor IT governance. The GSL, with donor support, could provide a technology implementation framework guide for SMEs to utilize when they embark on a new technology implementation to ensure that best practices are followed for a successful implementation. This guide would be helpful for small enterprises to understand the best practices for a technology implementation.

The components of the technology implementation framework guide could include:

- Strategy: Defining an integrated business and technology strategy that leverages technology solutions to achieve the organization's overall vision and goals. This includes evaluating the current technology landscape and choosing technology investments that are sustainable and benefit the business.
- Compliance: Governing the technology design and implementation to manage compliance to national standards (e.g., e-laws); managing non-compliances and remedial actions; guiding implementation to support the delivery of business strategy.
- Governance: Defining and implementing standards governance and guardrails relating to i) how architecture content is planned, developed, and maintained and ii) implementing business and technology solutions.
- Security: Understanding the threats the organization faces or will face and continuously monitoring security to detect and respond to potential cyber security breaches. SMEs need to identify and protect sensitive information assets from loss or misuse and ensure that personal data is handled and stored in line with relevant privacy laws and regulations (e.g., ISO 27000).
- Adoption and Communication: Supporting the adoption and use of the technology by communicating its services to employees and customers, managing the change impact of new features/services, and providing onboarding support for new employees.

Sweden's Agency for Digital Government develops building blocks, principles, and services that help public actors in their digitalization. They provide a set of rules and recommendations based on laws, regulations, principles, and/or frameworks. Users can search and filter to find information that applies to their digitalization issues. The rules and recommendations guide businesses on which initiatives they should priorities and invest in. GSL could reference sources like these when developing a guide for SMEs to utilize.

8. SME digital open forum

SME exports would benefit from collaboration with ecosystem partners on an open platform to continually innovate and improve their existing services and introduce new products, services, or processes. With an open forum and dialogue between SME exporters and their partners, companies can ask questions about digital practices/operations and share success stories. The collaboration among SMEs and accessibility to partners will spark ideas for new and effective ways to deliver their products/services. This aspect will be especially helpful for connecting small enterprises to the larger digital ecosystem.

Sri Lanka could create a technology ecosystem similar to the Sweden Tech Ecosystem platform, a digital meeting place for Sweden's tech ecosystem, where users can find data on start-ups, scale-ups, and funding. The platform was created in collaboration with the Swedish government and institutions and organizations from the public sector. The platform has resources for entrepreneurs and founders, investors, incubators and accelerators, talents, media and academia, and universities. The Sri Lankan platform could feature a specific channel for women-owned/-led businesses to connect and share their unique experiences. It could also include the ability to find content based on specific industries and the size of an organization.

9. SME Digital Education Toolkit

A majority of the surveyed SMEs do not have an updated record of their employees' skills, which is important to understanding the trainings and certifications that will be most useful. The GSL, with donor support, could create a Digital Education Toolkit with an assessment for SMEs and their employees to diagnose their strengths and areas for improvement when it comes to digital. The toolkit could be tailored to offer custom learning materials for small enterprises and women-owned/-led enterprises. With this baseline, SMEs and their employees can access case studies, certifications, online learning programs, and tools within the toolkit that are relevant to their digital development and growth. The toolkit will provide the GSL with an innovative way to structure learning for SMEs around new focus areas while providing education to SMEs of many styles and medium preferences.

An example of a similar tool is the United Nations (UN) Innovation toolkit, which includes 21 tools, step-by-step directions, worksheets, case studies, and references, as well as a 27-question assessment that diagnoses every user's strengths and areas for improvement when it comes to innovation. The platform is mobile-friendly so that users can access information on the go, and the diagnostic assessment provides insights to the application so that it could also proactively recommend learnings or materials for users. The content varies from standard learning modules to gamified content to appeal to team members of all levels. The application also captures and analyzes anonymous user data to inform learning development and module impact.

7.0 Conclusion

This study, which assessed the digital maturity of SMEs in Sri Lanka, reveals information previously lacking to provide evidence-based recommendations for improving digital readiness among SMEs in the country. This comprehensive study based on the Deloitte DMM found that there is a variety of digital maturity scores among SMEs in Sri Lanka, and only a small portion of SMEs have an ideal target level of digital maturity with a score above 75 percent. Opportunities still exist to improve SMEs' organizational readiness to unlock the full potential digital has to offer. SMEs that incorporate digital practices into their operations and culture will be able to participate in the global e-commerce landscape, providing job opportunities for Sri Lankans and driving the country's economic growth. Digital transformation needs to focus on fundamentally shifting an organization's operations and mindsets from "doing" digital to "being" digital.

The survey findings also revealed various digital maturity levels among SMEs across the five dimensions. The Operations dimension had the highest digital maturity score, followed by the Enabling Environment and Human Capital & Culture dimensions, the Technology dimension, and lastly, the Strategy dimension, which was found to be the least digitally mature.

The recommendations within this study were developed to meet the specific needs of Sri Lanka and supported by applications and best practices of international governments. SMEs can improve their digital maturity by updating their business strategies to incorporate technology adoption and utilizing technology to optimize their operations.

The digital transformation ecosystem is vast and complex, but there are opportunities for the Government of Sri Lanka and other organizations, including the private sector and donor community, to support SMEs by creating a digital ecosystem to help them navigate digital transformation. Whether it be increased access to resources through webinars and trainings or establishing governance frameworks for technology implementation, SMEs would benefit greatly from digital initiatives to help them compete in the global e-commerce landscape. Future research should focus on the effectiveness of digital initiatives to increase SMEs' digital maturity.

References

1. Bustis, A. D., Ganesan, V., & Herath, G. (2018, October 5). Unlocking Sri Lanka's digital opportunity. McKinsey & Company. https://www.mckinsey.com/businessfunctions/mckinsey-digital/our-insights/unlocking-sri-lankas-digital-opportunity.
2. Cameron, B., Guarini, M., Nottoson, L., & Lynch, D. (2021). The State Of IT Maturity, 2020 — On The Path To A Future Fit Technology Strategy. Forrester.
3. de Groote, O., Peters, K., & Nuyts, E. (2017, November 27). Deloitte Digital Maturity Survey. Deloitte Belgium. https://www2.deloitte.com/be/en/pages/strategyoperations/articles/so-deloitte-digital-maturity-survey.html.
4. Digital Transformation Success Stories Examples and How to Avoid Mistakes – NIX United. NIX United – Custom Software Development Company in US. (2021, March 18). https://nix-united.com/blog/digital-transformation-success-stories-examples/.
5. "Facebook Helps Sri Lankan Small Businesses Benefit from the Power of Digital Tools." Daily FT, 4 June 2021, https://www.ft.lk/it-telecom-tech/Facebook-helps-Sri-Lankan-small-businesses-benefit-from-the-power-of-digital-tools/50-718791?fbclid=IwAR36IccKEAFCzOF8QvblAcRwtKF8q-sxgl611VPUvd5LhS1wnJO5vqEUdI4.
6. Fenwick, N., Ewald, C., Bonde, A., LeClair, A., Schlader, T., Stewart, A., & Bakalar, M.(2021). Forrester Infographic: Covid-19 Accelerates Digital Business In 2021.www.forrester.com. Forrester. https://www.forrester.com/report/Forrester+Infographic+COVID19+Accelerates+Digita+Business+In+2021/-/E-RES163720?objectid=RES163720#dialog-1624294991066dialog.
7. Information and Communication Technology Agency. ICTA. Sri Lanka first in South Asia to adopt international standard for digital transactions. (2020, June 18). https://www.icta.lk/projects/sri-lanka-first-in-south-asia-to-adopt-international-standard for-digital-transactions-2/.
8. Kemp, S. (2021, February 12). Digital in Sri Lanka: All the Statistics You Need in 2021 DataReportal – Global Digital Insights. DataReportal. https://datareportal.com/reports/digital-2021-sri-lanka.
9. Lbo. (2017, July 21). Sri Lanka Customs launches online payment platform for Customs Declarations. Lanka Business Online. https://www.lankabusinessonline.com/sri-lankacustoms-launches-online-payment-platform-for-customs-declarations/.
10. Lincoln, L. (2019, January 1). U.S. Small and Medium Business Digital Transformation Study. SMB Group. https://www.smb-gr.com/2017-dt-study/.
11. Madurawala, S. (2015, March 8). Networking and Information: Crucial Ingredients in Empowering Women-Owned and Led Micro, Small and Medium Enterprises in Sri Lanka. Talking Economics. https://www.ips.lk/talkingeconomics/2015/03/08/networking-and information-crucial-ingredients-in-empowering-wmsme-in-sri-lanka/.
12. McKinsey & Company. (n.d.). Digital 20/20: McKinsey Digital. McKinsey & Company. https://www.mckinsey.com/business-functions/mckinsey-digital/how-we-help clients/digital-2020/overview.
13. Ministry of Digital Infrastructure and Information Technology (MDIIT), & Information and Communication Technology Agency of Sri Lanka. (2019, October 7). National Digital Policy for Sri Lanka 2020-2025.
14. Ministry of Finance, National Policy Framework Vistas of Prosperity and Splendour - (2020-2025) 1–76 (2020). Colombo; Government of Sri Lanka.
15. Paulk, M. C., Curtis, B., Chrissis, M. B., & Weber, C. V. (1993). Capability maturity model, version 1.1. IEEE Software, 10(4), 18–27. https://doi.org/10.1109/52.219617

16. Piyoshila. 2012. Small and Medium Enterprises (SME). http://www.nhrep.gov.lk/index.php?option=com_content&view=article&id=81&Itemid59&lang=en.
17. Rasool, R., & Dissanayake, R. (2019). Digital Transformation for Small & Medium Enterprises (SMEs): With Special Focus on Sri Lankan Context as an Emerging Economy. European Centre for Research Training and Development UK, 7(5), 59–76.
18. Context as an Emerging Economy. European Centre for Research Training and Development UK, 7(5), 59–76.
19. Schumacher, A., Erol, S., & Sihn, W. (2016). A Maturity Model for Assessing Industry 4.0Readiness and Maturity of Manufacturing Enterprises. Procedia CIRP, 52, 161–166. https://doi.org/10.1016/j.procir.2016.07.040
20. Shen, S., Lowndes, M. (2021, November 6). How to Develop a Digital Commerce Strategy. Gartner. https://www.gartner.com/document/code/378720?ref=authbody&refval=4008972
21. Shih, W. (2020, August 18). Global Supply Chains in a Post-Pandemic World. Harvard Business Review. https://hbr.org/2020/09/global-supply-chains-in-a-post-pandemicworld.
22. Swerdlow, F., Gill, M., Matzke, P., Schadler, T., Shaik, B., & Lynch, D. (2020, August 14). Retailers: Assess Your Digital Business Maturity. https://www.forrester.com/report/Retailers+Assess+Your+Digital+Business+Maturity/ /E-RES61070.
23. Tennakoon, T. M. K. B., National Policy Framework for Small Medium Enterprise (SME) Development (2015). http://www.industry.gov.lk/web/images/pdf/nateng.pdf.
24. The Commonwealth, & Sri Lanka Export Development Board. (2020, March). E-commerce Readiness Assessment Report Sri Lanka.
25. Vaidyanathan, P. (2020, March 13). Council Post: How Small Businesses Should Approach Digital Transformation. Forbes. https://www.forbes.com/sites/forbesagencycouncil/2020/03/13/how-small-businessesshould-approach-digital-transformation/?sh=49ea2b007495.
26. Wijayasiri, J. (2020). COVID-19 and Impact on Export Sector in Sri Lanka. In Crisis and fragility: Economic Impact of COVID-19 and Policy Responses (pp. 55–67). essay, KIEP Visiting Scholars Program.
27. Wijayasiri, J. (2016, November 28). Trade is Not Just for Big Businesses: Role of Sri Lankan SMEs in Trade. Talking Economics. https://www.ips.lk/talkingeconomics/2016/11/28/tradeis-not-just-for-bigbusinessesrole-of-sri-lankan-smes-in-trade/.
28. Wijayasiri, J., & Jayaratne, S. (2009). The Impact of Information Technology (IT) in Trade Facilitation on Small and Medium Enterprises (SMEs) in Sri Lanka. Asia-Pacific Research and Training Network on Trade.
29. Williams, C., Lang, K., Schallmo, D., & Boardman, L. June 2019. Digital Maturity Models for Small and Medium-sized Enterprises: A Systematic Literature Review IPSIM Innovation Conference. Florence.
30. World Bank Group. (n.d.). Economy Profile of Sri Lanka - Doing Business 2020. www.doingbusiness.org. https://www.doingbusiness.org/content/dam/doingBusiness/country/s/sri-lanka/LKA.pdf.
31. World Trade Organization. (2018, July 29). World Trade Organization – Trade Facilitation Agreement Facility. Trade Facilitation Agreement Facility. https://www.tfafacility.org/sri-lanka-launches-trade-information-portal.

Contacts

Please contact the people below for clarifications regarding the Digital Maturity Model, survey questionnaire, findings, or recommendations.

Sam Riemer
Digital Expert,
Deloitte Consulting LLP
sriemer@deloitte.com

Harper Drake
Digital Consultant,
Deloitte Consulting LLP
hdrake@deloitte.com

For queries about the PARTNER project, please contact the person listed below.

Gamini Nanda Gunawardana
Digital IT Expert,
USAID/PARTNER project
Gamini.gunawardana@partnersl.lk