Being Digitally Enabled

Guidebook 4

PLC Transformation (PLCT) Programme

Towards a more responsible and high performing Corporate Malaysia

BURSA MALAYSIA

A quick tour of Guidebook 4

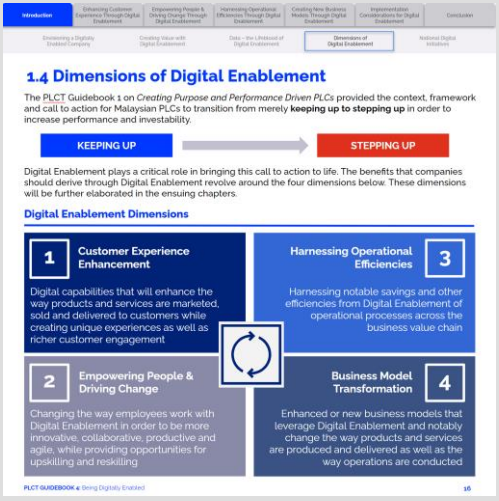
Being Digitally Enabled

Guidebook 4 highlights the opportunities, benefits and imperatives for companies to adopt Digital Enablement, which will ultimately lead to notable improvements in overall performance and investability. This Guidebook focuses on how PLCs can derive benefits from Digital Enablement along the 4 dimensions of:

- Enhancing customer experience
- Empowering people and driving change
- Harnessing operational efficiencies
- Creating new business models

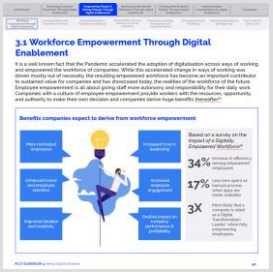
While this Guidebook does not focus on technology developments given how rapidly technologies evolve, many technological aspects, have been included to illustrate the implementation aspects of key propositions. Global and local examples and case studies as well as practice aids have also been included wherever possible to augment the principles and propositions outlined in this Guidebook in order to provide a better appreciation of the 'how-to' aspects.

The chart below and following pages provide an overview and quick tour of Guidebook 4.

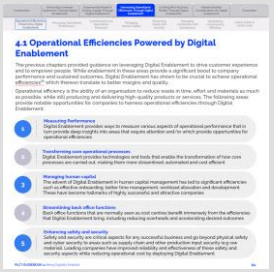


Dimensions of Digital Enablement

Customer Experience in the Digital Age

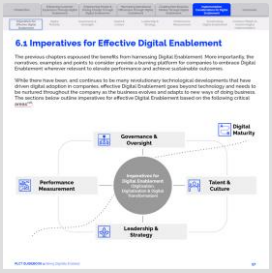


Empowering People & Driving Change through Digital Enablement



Harnessing Operational Efficiencies through Digital Enablement

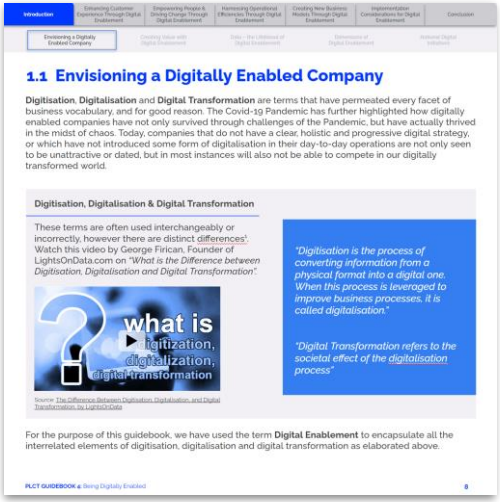
Creating New Business Models



Imperatives for Effective Digital Enablement

Chapter 1: Introduction

Digital Enablement has become table stakes for companies to survive in the digital age. The Guidebook provides a definition of **'Digitisation'**, **'Digitalisation'** and **'Digital Transformation'** and the term **'Digital Enablement'** in this Guidebook is used to encapsulate these three important elements.



1.1 Envisioning a Digitally Enabled Company

Digitisation, **Digitalisation** and **Digital Transformation** are terms that have permeated every facet of business vocabulary, and for good reason. The Covid-19 Pandemic has further highlighted how digitally enabled companies have not only survived through challenges of the Pandemic, but have actually thrived in the midst of chaos. Today, companies that do not have a clear, holistic and progressive digital strategy, or which have not introduced some form of digitalisation in their day-to-day operations are not only seen to be unattractive or dated, but in most instances will also not be able to compete in our digitally transformed world.

Digitisation, Digitalisation & Digital Transformation

These terms are often used interchangeably or incorrectly, however there are distinct differences[1]. Watch this video by George Firican, Founder of LightsOnData.com on *"What is the Difference between Digitisation, Digitalisation and Digital Transformation"*.

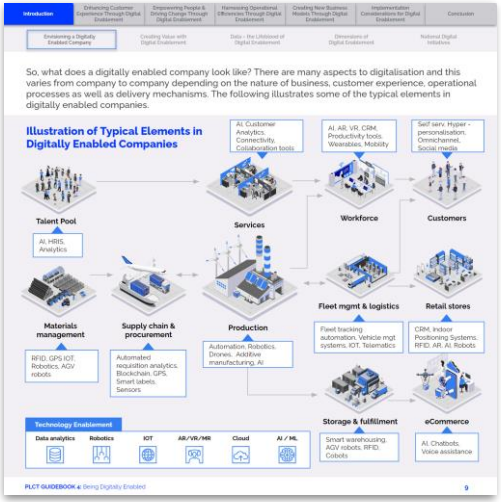
Source: The Difference Between Digitization, Digitalization, and Digital Transformation, by LightsOnData

"Digitisation is the process of converting information from a physical format into a digital one. When this process is leveraged to improve business processes, it is called digitalisation."

"Digital Transformation refers to the societal effect of the digitalisation process"

For the purpose of this guidebook, we have used the term **Digital Enablement** to encapsulate all the interrelated elements of digitisation, digitalisation and digital transformation as elaborated above.

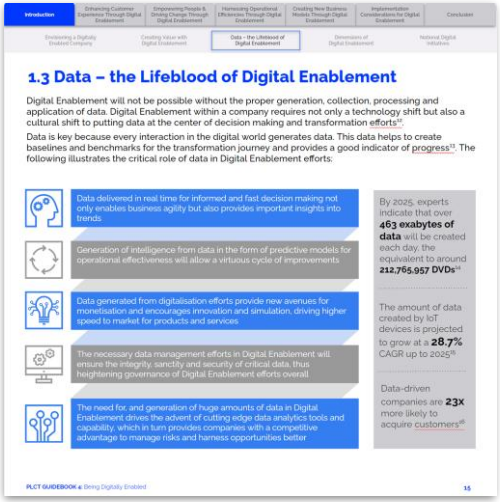
Explanation of the differences between Digitisation, Digitalisation and Digital Transformation



So, what does a digitally enabled company look like? There are many aspects to digitalisation and this varies from company to company depending on the nature of business, customer experience, operational processes as well as delivery mechanisms. The following illustrates some of the typical elements in digitally enabled companies.

Illustration of Typical Elements in Digitally Enabled Companies

An illustration of typical elements in digitally enabled companies



1.3 Data – the Lifeblood of Digital Enablement

Digital Enablement will not be possible without the proper generation, collection, processing and application of data. Digital Enablement within a company requires not only a technology shift but also a cultural shift to putting data at the center of decision making and transformation efforts[11].

Data is key because every interaction in the digital world generates data. This data helps to create baselines and benchmarks for the transformation journey and provides a good indicator of progress[12]. The following illustrates the critical role of data in Digital Enablement efforts:

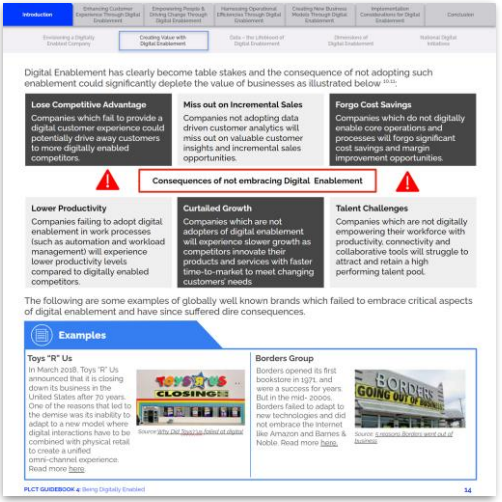
- Data delivered in real time for informed and fast decision making not only enables business agility but also provides important insights into trends
- Generation of intelligence from data in the form of predictive models for operational effectiveness will allow a virtuous cycle of improvements
- Data generated from digitalisation efforts provide new avenues for monetisation and encourages innovation and simulation, driving higher speed to market for products and services
- The necessary data management efforts in Digital Enablement will ensure the integrity, sanctity and security of critical data, thus heightening governance of Digital Enablement efforts overall
- The need for, and generation of huge amounts of data in Digital Enablement drives the advent of cutting edge data analytics tools and capability, which in turn provides companies with a competitive advantage to manage risks and harness opportunities better

By 2025, experts indicate that over **463 exabytes of data** will be created each day; the equivalent to around **212,765,957 DVDs**[14]

The amount of data created by IoT devices is projected to grow at a **28.7%** CAGR up to 2025[15]

Data-driven companies are **23x** more likely to acquire customers[16]

The importance of Data collection, processing and application for effective Digital Enablement



Digital Enablement has clearly become table stakes and the consequence of not adopting such enablement could significantly deplete the value of businesses as illustrated below [10,11].

Lose Competitive Advantage
Companies which fail to provide a digital customer experience could potentially drive away customers to more digitally enabled competitors.

Miss out on Incremental Sales
Companies not adopting data driven customer analytics will miss out on valuable customer insights and incremental sales opportunities.

Forgo Cost Savings
Companies which do not digitally enable core operations and processes will forgo significant cost savings and margin improvement opportunities.

Consequences of not embracing Digital Enablement

Lower Productivity
Companies failing to adopt digital enablement in work processes (such as automation and workload management) will experience lower productivity levels compared to digitally enabled competitors.

Curtailed Growth
Companies which are not adopters of digital enablement will experience slower growth as competitors innovate their products and services with faster time-to-market to meet changing customers' needs

Talent Challenges
Companies which are not digitally empowering their workforce with productivity, connectivity and collaborative tools will struggle to attract and retain a high performing talent pool.

The following are some examples of globally well known brands which failed to embrace critical aspects of digital enablement and have since suffered dire consequences.

Examples

Toys "R" Us

In March 2018, Toys "R" Us announced that it is closing down its business in the United States after 70 years. One of the reasons that led to the demise was its inability to adapt to a new model where digital interactions have to be combined with physical retail to create a unified omni-channel experience. Read more here

Source: Why Did Toys'us Failed of digital

Borders Group

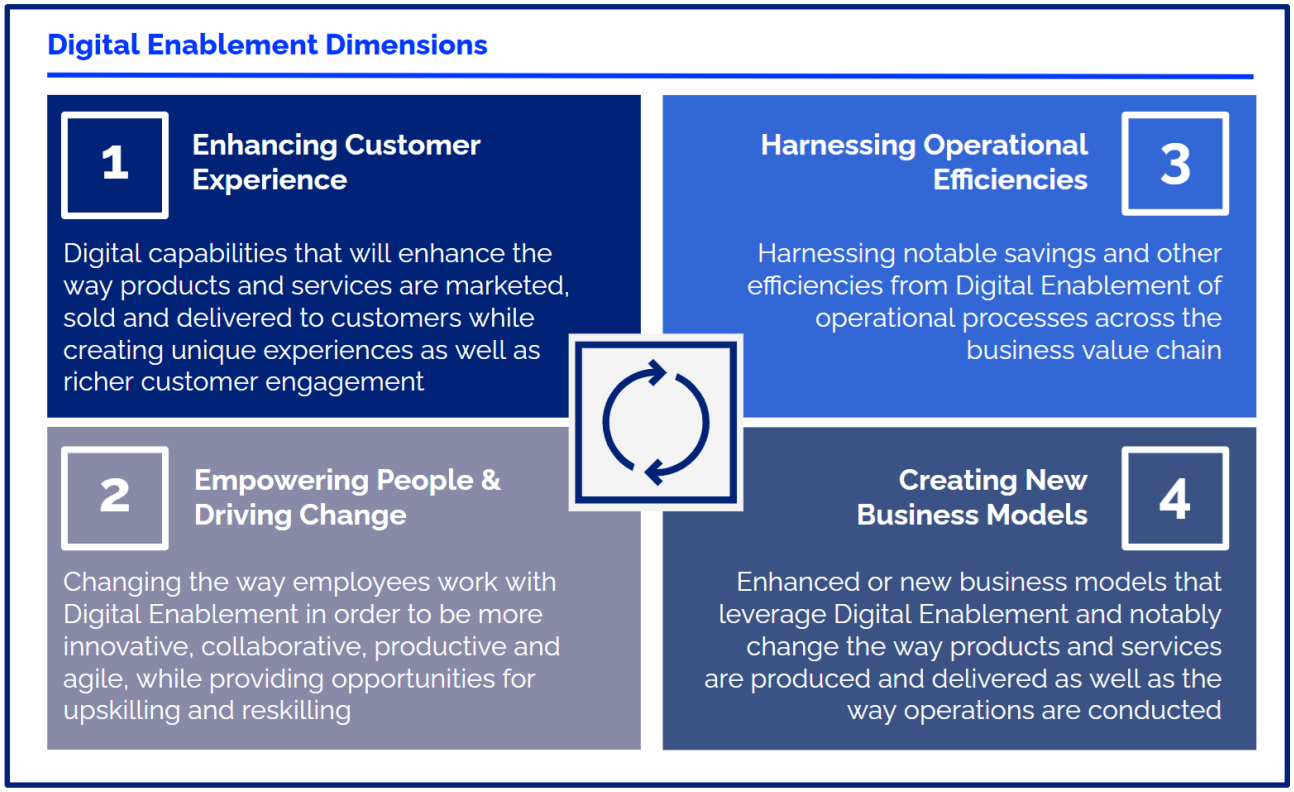
Borders opened its first bookstore in 1971, and were a success for years. But in the mid- 2000s, Borders failed to adapt to new technologies and did not embrace the internet like Amazon and Barnes & Noble. Read more here.

Source: 5 reasons Borders went out of business

The importance of digital in creating value and dire consequences for companies which do not adopt Digital Enablement

Chapter 1: Introduction

The chapter then talks about benefits that companies should derive through Digital Enablement which revolve around the four dimensions below. These dimensions are further elaborated in the ensuing chapters.

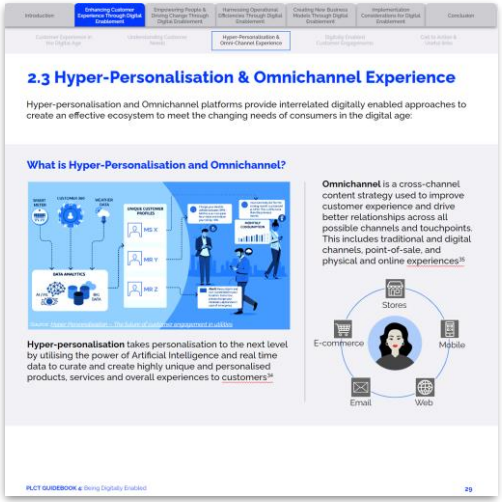


Chapter 2: Enhancing Customer Experience through Digital Enablement

This chapter outlines how Digital Enablement allow companies to create unique, enhanced or even new experiences for consumers. By doing so, companies will be able to gain access to a wider customer base as well as being able to better meet the needs of its customers in this digital age.

Articulates how Digital Enablement has allowed companies to create unique, enhanced or even new experiences for consumers

Outlines the importance of understanding customer needs and behaviour in order to better serve the their changing demands.

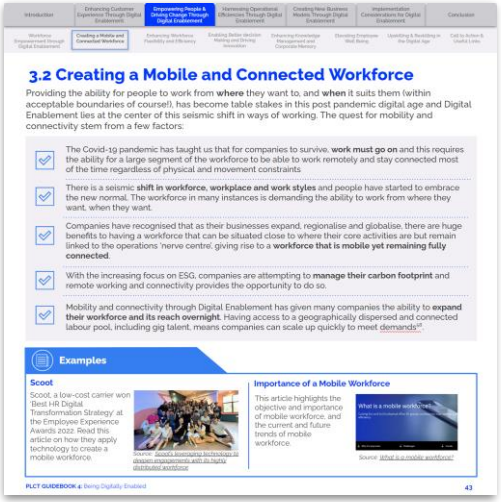


Provides an overview on why hyper-personalisation and seamless omnichannel experience is important and key guidance for companies wanting to embark on these efforts

Highlights the ways in which companies can use Digital Enablement tools to better communicate with customers

Chapter 3: Empowering People and Driving Change through Digital Enablement

This chapter outlines how Digital Enablement positively impacts workforce aspects of mobility, connectivity, flexibility, efficiency, innovation, decision making, knowledge management and wellbeing while empowering people and driving change.



3.2 Creating a Mobile and Connected Workforce

Providing the ability for people to work from **where** they want to, and **when** it suits them (within acceptable boundaries of course!), has become table stakes in this post pandemic digital age and Digital Enablement lies at the center of this seismic shift in ways of working. The quest for mobility and connectivity stem from a few factors:

- The Covid-19 pandemic has taught us that for companies to survive, **work must go on** and this requires the ability for a large segment of the workforce to be able to work remotely and stay connected most of the time regardless of physical and movement constraints.
- There is a seismic **shift in workforce, workplace and work styles** and people have started to embrace the new normal. The workforce in many instances is demanding the ability to work from where they want, when they want.
- Companies have recognised that as their businesses expand, regionalise and globalise, there are huge benefits to having a workforce that can be situated close to where their core activities are but remain linked to the operations 'nerve centre', giving rise to a **workforce that is mobile yet remaining fully connected**.
- With the increasing focus on ESG, companies are attempting to **manage their carbon footprint** and remote working and connectivity provides the opportunity to do so.
- Mobility and connectivity through Digital Enablement has given many companies the ability to **expand their workforce and its reach overnight.** Having access to a geographically dispersed and connected labour pool, including gig talent, means companies can scale up quickly to meet demands[39].

Examples

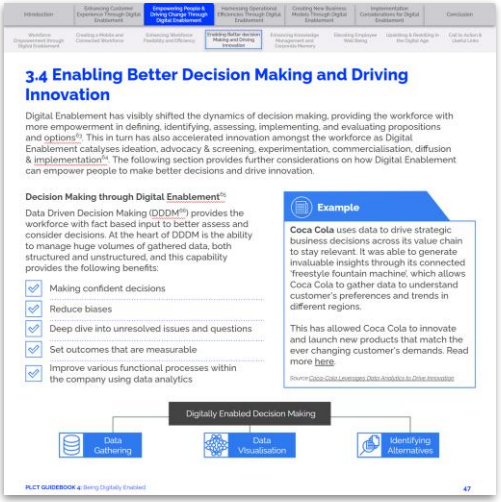
Scoot

Scoot, a low-cost carrier won 'Best HR Digital Transformation Strategy' at the Employee Experience Awards 2022. Read this article on how they apply technology to create a mobile workforce.

Importance of a Mobile Workforce

This article highlights the objective and importance of mobile workforce, and the current and future trends of mobile workforce.

Highlights the underlying drivers for a mobile and connected workforce as well as the prerequisites for an effective workforce



3.4 Enabling Better Decision Making and Driving Innovation

Digital Enablement has visibly shifted the dynamics of decision making, providing the workforce with more empowerment in defining, identifying, assessing, implementing, and evaluating propositions and options[53]. This in turn has also accelerated innovation amongst the workforce as Digital Enablement catalyses ideation, advocacy & screening, expansion, commercialisation, diffusion & implementation[54]. The following section provides further considerations on how Digital Enablement can empower people to make better decisions and drive innovation.

Decision Making through Digital Enablement[55]

Data Driven Decision Making (DDDM[56]) provides the workforce with fact based input to better assess and consider decisions. At the heart of DDDM is the ability to manage huge volumes of gathered data, both structured and unstructured, and this capability provides the following benefits:

- Making confident decisions
- Reduce biases
- Deep dive into unresolved issues and questions
- Set outcomes that are measurable
- Improve various functional processes within the company using data analytics

Example

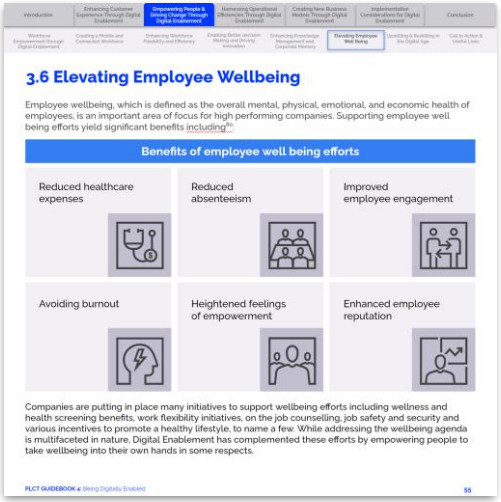
Coca Cola uses data to drive strategic business decisions across its value chain to stay relevant. It was able to generate invaluable insights through its connected 'freestyle fountain machine', which allows Coca Cola to gather data to understand customer's preferences and trends in different regions.

This has allowed Coca Cola to innovate and launch new products that match the ever changing customer's demands. Read more here.

Digitally Enabled Decision Making

Data Gathering | Data Visualisation | Identifying Alternatives

Provides for how Digital Enablement can empower employees to make better decision and drive innovation



3.6 Elevating Employee Wellbeing

Employee wellbeing, which is defined as the overall mental, physical, emotional, and economic health of employees, is an important area of focus for high performing companies. Supporting employee well being efforts yield significant benefits including[86].

Benefits of employee well being efforts

- Reduced healthcare expenses
- Reduced absenteeism
- Improved employee engagement
- Avoiding burnout
- Heightened feelings of empowerment
- Enhanced employee reputation

Companies are putting in place many initiatives to support wellbeing efforts including wellness and health screening benefits, work flexibility initiatives, on the job counselling, job safety and security and various incentives to promote a healthy lifestyle, to name a few. While addressing the wellbeing agenda is multifaceted in nature, Digital Enablement has complemented these efforts by empowering people to take wellbeing into their own hands in some respects.

Outlines the benefits of employee wellbeing efforts and how Digital Enablement can support that

3.7 Upskilling & Reskilling in the Digital Age

With the changing shape of the workforce, workplace and workstyles, the future of work requires people to be upskilled and/or reskilled to be relevant to the needs of the workforce of the future[96]. It is a well known fact that many jobs that existed in the past will not be relevant or even exist in the near future and conversely, many jobs of the future are those that do not exist today.

While Digital Enablement is one of the catalysts for this change envisaged in the future of work, Digital Enablement also provides the accelerators required for the workforce to be reskilled or upskilled for the future. The following examples provide some perspectives on how Digital Enablement can support and drive the workforce for the future:

Examples

Upskilling & Reskilling Employees in the Digital Age

The following articles provide some key considerations on how digital enablement can support organisations in upskilling or reskilling its employees

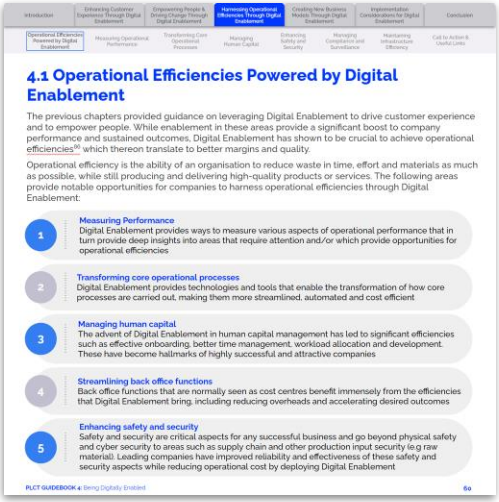
In this video, PwC shares their story on digital transformation and upskilling their workforce. To do so, PwC had to re-examine the way they worked and interacted, employee behaviour, business needs as well as technological skills. Watch this video to learn more.

Read more articles on how to upskill employees in the digital world by Harvard Business Review and Forbes.

Provides for how Digital Enablement can accelerate upskilling and reskilling

Chapter 4: Harnessing Operational Efficiencies through Digital Enablement

This chapter highlights the areas where significant efficiencies can be driven through Digital enablement and illustrates how the essential 8 technologies act as building blocks for Digital Enablement to harness these efficiencies.



4.1 Operational Efficiencies Powered by Digital Enablement

The previous chapters provided guidance on leveraging Digital Enablement to drive customer experience and to empower people. While enablement in these areas provide a significant boost to company performance and sustained outcomes, Digital Enablement has shown to be crucial to achieve operational efficiencies[59] which thereon translate to better margins and quality.

Operational efficiency is the ability of an organisation to reduce waste in time, effort and materials as much as possible, while still producing and delivering high-quality products or services. The following areas provide notable opportunities for companies to harness operational efficiencies through Digital Enablement:

1. **Measuring Performance**
   Digital Enablement provides ways to measure various aspects of operational performance that in turn provide deep insights into areas that require attention and/or which provide opportunities for operational efficiencies
2. **Transforming core operational processes**
   Digital Enablement provides technologies and tools that enable the transformation of how core processes are carried out, making them more streamlined, automated and cost efficient
3. **Managing human capital**
   The advent of Digital Enablement in human capital management has led to significant efficiencies such as effective onboarding, better time management, workload allocation and development. These have become hallmarks of highly successful and attractive companies
4. **Streamlining back office functions**
   Back office functions that are normally seen as cost centres benefit immensely from the efficiencies that Digital Enablement bring, including reducing overheads and accelerating desired outcomes
5. **Enhancing safety and security**
   Safety and security are critical aspects for any successful business and go beyond physical safety and cyber security to areas such as supply chain and other production input security (e.g raw material). Leading companies have improved reliability and effectiveness of these safety and security aspects while reducing operational cost by deploying Digital Enablement

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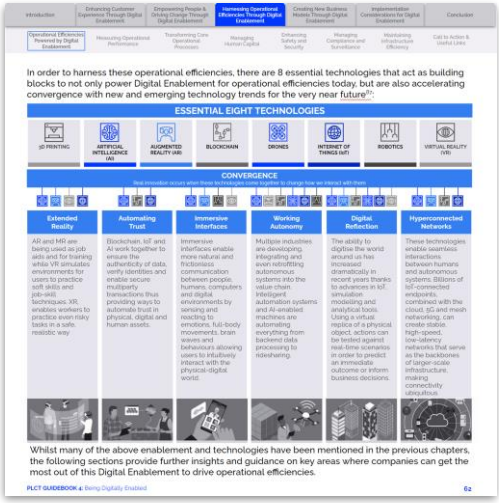
The key areas where companies can harness significant operational efficiencies through Digital Enablement



In order to harness these operational efficiencies, there are 8 essential technologies that act as building blocks to not only power Digital Enablement for operational efficiencies today, but are also accelerating convergence with new and emerging technology trends for the very near future[61]:

ESSENTIAL EIGHT TECHNOLOGIES

3D PRINTING · ARTIFICIAL INTELLIGENCE (AI) · AUGMENTED REALITY (AR) · BLOCKCHAIN · DRONES · INTERNET OF THINGS (IoT) · ROBOTICS · VIRTUAL REALITY (VR)

CONVERGENCE

Extended Reality	Automating Trust	Immersive Interfaces	Working Autonomy	Digital Reflection	Hyperconnected Networks
AR and MR are being used as job aids and for training while VR simulates environments for users to practice soft skills and job-skill techniques. XR enables workers to practice even risky tasks in a safe, realistic way	Blockchain, IoT and AI work together to ensure the authenticity of data, verify identities and enable secure multiparty transactions thus providing ways to automate trust in physical, digital and human assets.	Immersive interfaces enable more natural and frictionless communication between people, humans, computers and digital environments by sensing and reacting to emotions, full-body movements, brain waves and behaviours allowing users to intuitively interact with the physical-digital world.	Multiple industries are developing, integrating and even retrofitting autonomous systems into the value chain. Intelligent automation systems and AI-enabled machines are automating everything from backend data processing to ridesharing.	The ability to digitise the world around us has increased dramatically in recent years thanks to advances in IoT, simulation modelling and analytical tools. Using a virtual replica of a physical object, actions can be tested against real-time scenarios in order to predict an immediate outcome or inform business decisions.	These technologies enable seamless interactions between humans and autonomous systems. Billions of IoT-connected endpoints, combined with the cloud, 5G and mesh networking, can create stable, high-speed, low-latency networks that serve as the backbones of larger-scale infrastructure, making connectivity ubiquitous

Whilst many of the above enablement and technologies have been mentioned in the previous chapters, the following sections provide further insights and guidance on key areas where companies can get the most out of this Digital Enablement to drive operational efficiencies.

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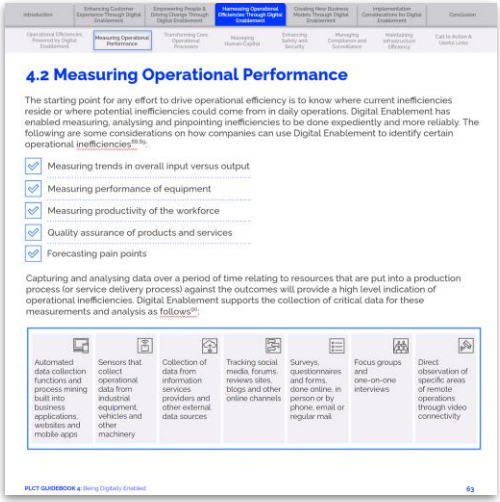
How the 8 essential technologies are being deployed to accelerate operational efficiencies



4.2 Measuring Operational Performance

The starting point for any effort to drive operational efficiency is to know where current inefficiencies reside or where potential inefficiencies could come from in daily operations. Digital Enablement has enabled measuring, analysing and pinpointing inefficiencies to be done expediently and more reliably. The following are some considerations on how companies can use Digital Enablement to identify certain operational inefficiencies[59,96]:

- Measuring trends in overall input versus output
- Measuring performance of equipment
- Measuring productivity of the workforce
- Quality assurance of products and services
- Forecasting pain points

Capturing and analysing data over a period of time relating to resources that are put into a production process (or service delivery process) against the outcomes will provide a high level indication of operational inefficiencies. Digital Enablement supports the collection of critical data for these measurements and analysis as follows[59]:

Automated data collection functions and process mining built into business applications, websites and mobile apps	Sensors that collect operational data from industrial equipment, vehicles and other machinery	Collection of data from information services providers and other external data sources	Tracking social media, forums, reviews sites, blogs and other online channels	Surveys, questionnaires and forms, done online, in person or by phone, email or regular mail	Focus groups and one-on-one interviews	Direct observation of specific areas of remote operations through video connectivity	

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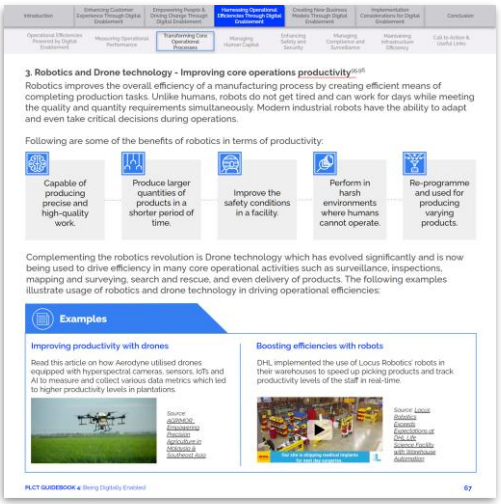
How Digital Enablement provides ways to measure various aspects of operations that provides deep insights into areas that require attention



3. Robotics and Drone technology - Improving core operations productivity[95,97]

Robotics improves the overall efficiency of a manufacturing process by creating efficient means of completing production tasks. Unlike humans, robots do not get tired and can work for days while meeting the quality and quantity requirements simultaneously. Modern industrial robots have the ability to adapt and even take critical decisions during operations.

Following are some of the benefits of robotics in terms of productivity:

- Capable of producing precise and high-quality work.
- Produce larger quantities of products in a shorter period of time.
- Improve the safety conditions in a facility.
- Perform in harsh environments where humans cannot operate.
- Re-programme and used for producing varying products.

Complementing the robotics revolution is Drone technology which has evolved significantly and is now being used to drive efficiency in many core operational activities such as surveillance, inspections, mapping and surveying, search and rescue, and even delivery of products. The following examples illustrate usage of robotics and drone technology in driving operational efficiencies:

Examples

Improving productivity with drones

Read this article on how Aerodyne utilised drones equipped with hyperspectral cameras, sensors, IoTs and AI to measure and collect various data metrics which led to higher productivity levels in plantations.

Source: AUDACIA: Empowering Precision Agriculture in Malaysia & Southeast Asia

Boosting efficiencies with robots

DHL implemented the use of Locus Robotics' robots in their warehouses to speed up picking products and track productivity levels of the staff in real-time.

Source: Locus Robotics Exceeds Expectations at One Life Science Facility with Warehouse Automation

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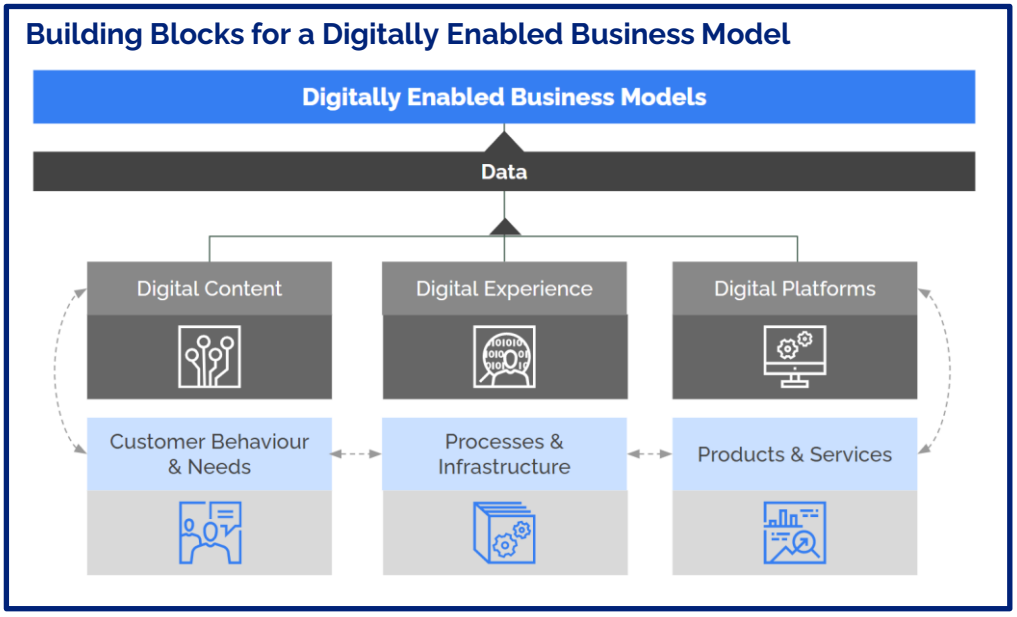
Outlines the various Digital Enablement tools to harness operational efficiencies

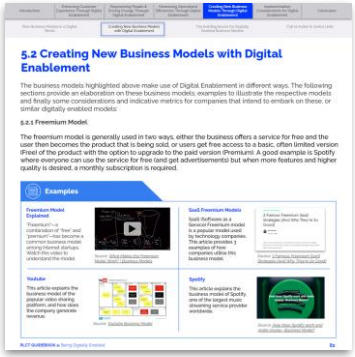
Chapter 5: Creating New Business Models through Digital Enablement

This chapter elaborates on how new business models can be created through Digital Enablement providing new ways to monetise and deliver products and services. It also provides the features, critical considerations and common metrics for various models and highlights the building blocks for companies to create further unique business models in the digital age.

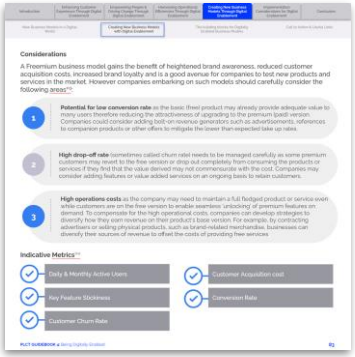


Factors driving transformation and disruption of traditional business models

The 6 common types of Digitally Enabled business models



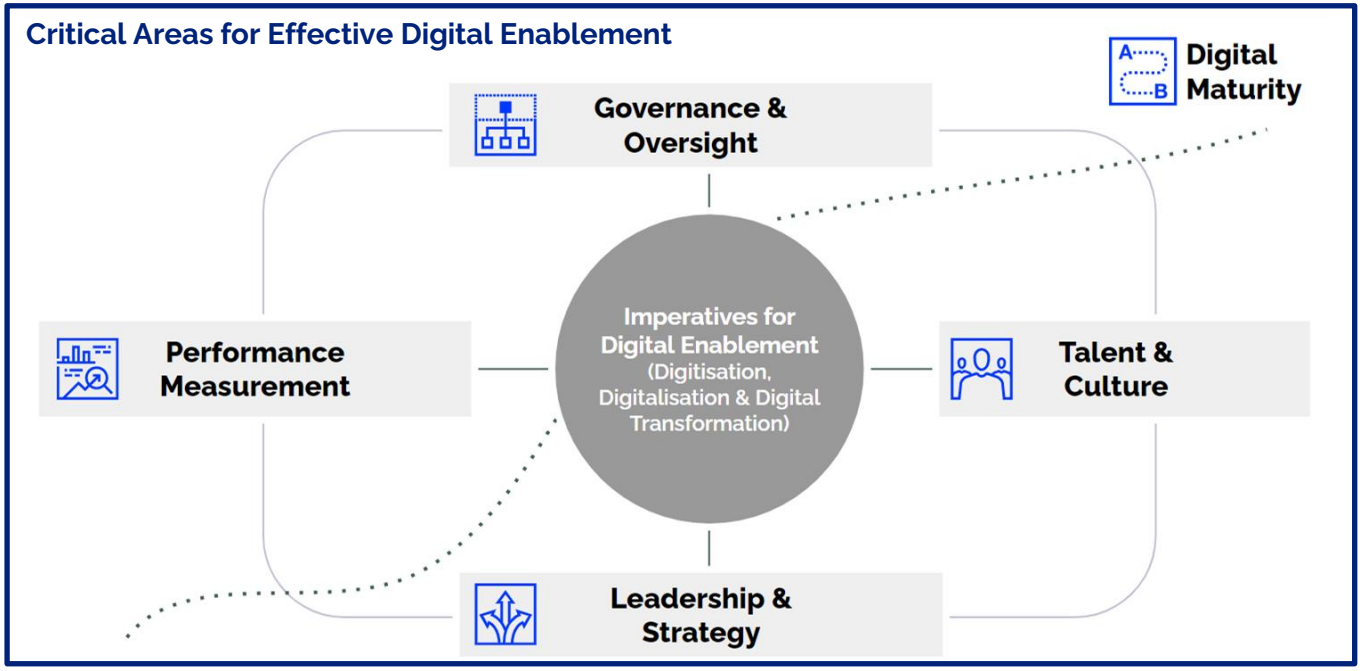
Examples illustrating various types of Digitally Enabled business models

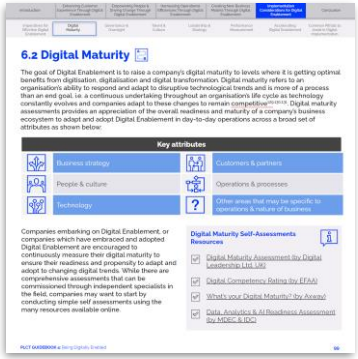


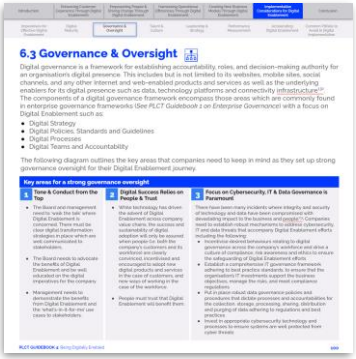
Key considerations and metrics to measure success of each model

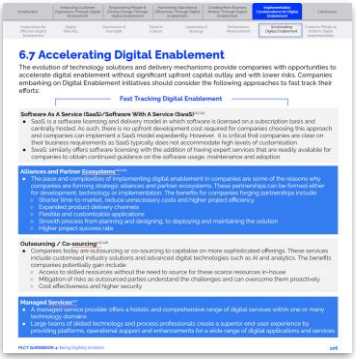
Chapter 6: Implementation Considerations for Digital Enablement

The penultimate chapter highlights critical implementation considerations for effective Digital Enablement. This chapter also elaborates on options for companies to accelerate Digital Enablement as well as the common pitfalls to avoid in digital transformation efforts.




6.2 Digital Maturity


6.3 Governance & Oversight


6.7 Accelerating Digital Enablement


6.8 Common Pitfalls to Avoid in Digital Implementation

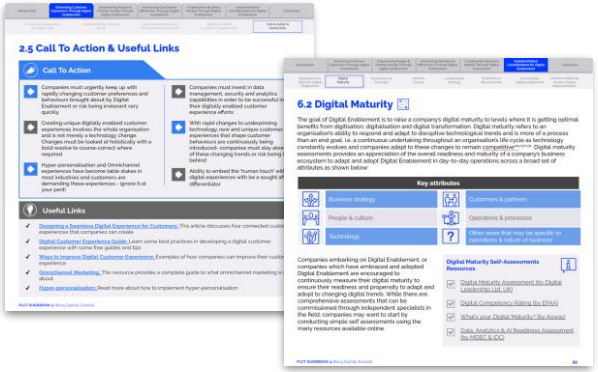
Articulates key attributes required in each critical area for effective Digital Enablement

Ways to fast track Digital Enablement without significant upfront capital outlay and lower risk

Checklist of common pitfalls to minimise the risk of failed digital efforts

Bringing to Life Guidebee 4

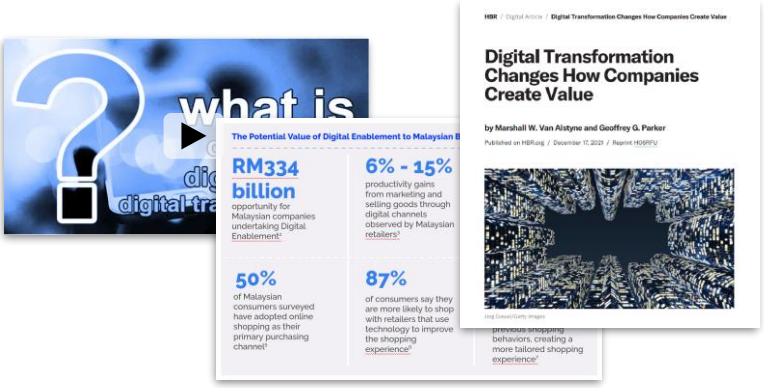
Throughout the Guidebook, comprehensive supplemental content and resources have also been included to support and enable implementation efforts.



Useful links, references & practice aids provide further reading and guidance for implementation

Video interviews with digital leaders sharing points of view from their own digital implementation efforts

Case studies and examples showcasing success stories and lessons learnt from local and global companies



Scholarly articles, statistics and videos that provide further illustrations and insights to support propositions in the guidebook

A Call to Action

This guidebook provides pertinent areas to be considered by PLCs in their efforts to harness the benefits from Digital Enablement. The principles, examples, case studies and calls to actions, as well as the various links and enabling practice aids in this guidebook have been provided with the intent of accelerating digital transformation efforts by PLCs.

1

#digitalisaboutbusiness
It is clear that adopting Digital Enablement has become table stakes for companies to survive in this digital age.

2

#digitalisaboutpeople
To ensure success and sustainability of Digital Enablement efforts, a people-centric view must be adopted at all times

3

#digitalisabouttechnology
The impact of technology must not be downplayed, companies will need to keep abreast of changes in technology and business landscape and be ready to course-correct where required.

With the series of Guidebooks that have been launched, PLCs can take action to improve performance as well as elevate its growth and market competitiveness.

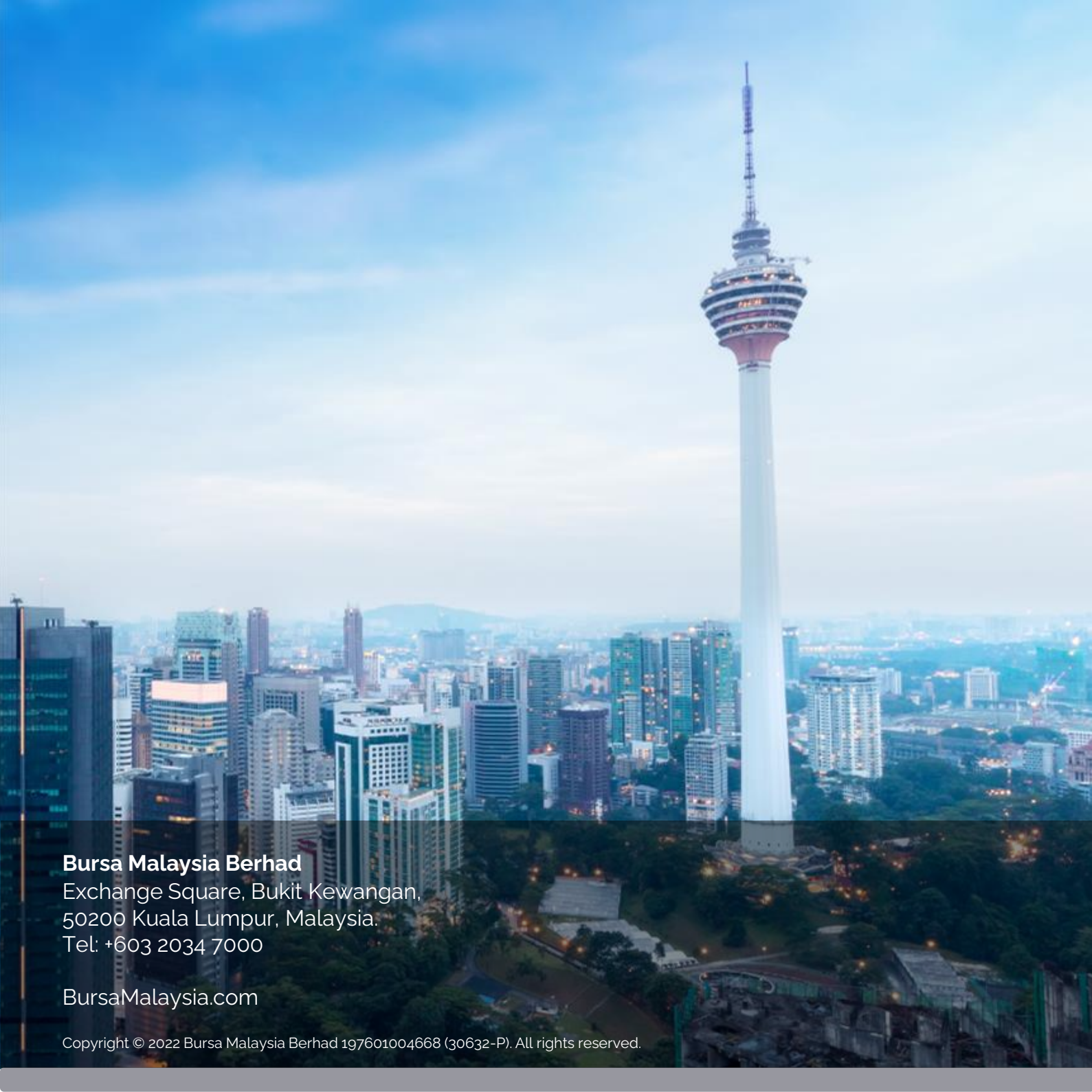
Guidebook 1
Creating Purpose & Performance Driven PLCs

Guidebook 2
Sustainable, Socially Responsible & Ethical PLCs

Guidebook 3
Strengthening Stakeholder Management & Investor Relations

Guidebook 4
Being Digitally Enabled

Guidebook 5
Contributing Towards Nation Building



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