



Being Digitally Enabled

Guidebook

4

PLC Transformation (PLCT) Programme

Towards a more responsible and high performing
Corporate Malaysia



A quick tour of Guidebook 4

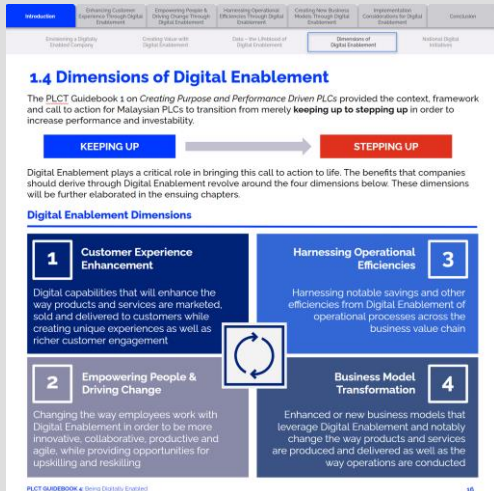
Being Digitally Enabled

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

2.1 Customer Experience in the Digital Age

The prime customer in today's age lives in the digital age. With the advent of new, cost-effective digital products, services and value through Digital Enablement, companies have managed to create unique, memorable and immersive experiences that truly resonate. They're now enabled to more effectively meet their customers' needs and expectations for convenience and embracing Digital Enablement is being made necessary to bridge the gap of customers, but also the benefits of digital to the customer experience in the digital age.

Customer experience is generally made-up of the following attributes:

- Reliability:** The brand or individual services, products and solutions.
- Personalisation:** Personalised services and solutions.
- Consistency:** Consistent and reliable services, products and solutions.
- Accessibility:** Available and accessible services, products and solutions.
- Efficiency:** Efficient and effective services, products and solutions.
- Flexibility:** Customisable services, products and solutions.
- Transparency:** Clear and open services, products and solutions.
- Security:** Secure and safe services, products and solutions.
- Support:** Available and effective services, products and solutions.
- Engagement:** Engaging and interactive services, products and solutions.
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- Engagement:** Engaging and interactive services, products and solutions.

By 2022, the 60% of retailers that have joined an 'omni-channel' service technology strategy to digital transformation and will **28% Revenue** and **10% margin** will increase in **customer loyalty** and **5% decrease** in **staff turnover** (PLCT).

Customer Experience in the Digital Age

3.1 Workforce Empowerment Through Digital Enablement

In a work environment that the Pandemic accelerated the adoption of digitalisation across ways of working and productivity, the resulting empowerment enables has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness. The digital enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness. The digital enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness.

Benefits comparison against to derive from workforce empowerment

- 34% Increase in productivity
- 17% Increase in employee engagement
- 3X Increase in digital skills

Empowering People & Driving Change through Digital Enablement

4.1 Operational Efficiencies Powered by Digital Enablement

The process-oriented systems on leveraging Digital Enablement to drive customer experience and to improve people. While evolution in these areas provide a significant boost to company performance and overall success, Digital Enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness. The digital enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness.

- 1 Improving performance**
Digital Enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness. The digital enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness.
- 2 Streamlining operations**
Digital Enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness. The digital enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness.
- 3 Managing resources**
Digital Enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness. The digital enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness.
- 4 Reducing risk**
Digital Enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness. The digital enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness.
- 5 Improving safety and security**
Digital Enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness. The digital enablement has driven the workforce to embrace digital enablement to enhance their productivity and effectiveness.

Harnessing Operational Efficiencies through Digital Enablement

5.3 The building blocks for Digitally Enabled Business Models

In a process of the various models depicted in the section above show that there are a few common attributes that integrate each other either through convergence or contribution, to create unique, digitally enabled business models as depicted in this diagram.

Digitally Enabled Business Models

- Digital Context
- Digital Business
- Digital Delivery

Customer Behaviour & Needs

Processes & Infrastructure

Products & Services

By being a step ahead of these attributes, companies can determine their contribution or convergence of these attributes to create the context of a digitally enabled business model that would meet market needs to create a sustainable proposition of sustainable value for the business.

Creating New Business Models

6.1 Imperatives for Effective Digital Enablement

The previous chapters expounded the benefits from leveraging Digital Enablement. More importantly, the operations, operations and people to enable provide a strong platform for companies to embrace Digital Enablement wherever relevant to enhance performance and achieve sustainable solutions.

While there have been, and continue to be many great digital technology developments that have driven digital adoption in companies, effective Digital Enablement goes beyond technology and needs to be well thought through the company in the business system, approach to the ways of doing business, and the business model. The imperatives for effective Digital Enablement are the following:

- Performance Measurement
- Governance & Oversight
- Talent & Culture
- Leadership & Strategy
- Digital Maturity

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. Watch this video by George Friran, Founder of LightsOnData.com on "What is the Difference between Digitisation, Digitalisation and Digital Transformation?"

"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.

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Explanation of the differences between Digitisation, Digitalisation and Digital Transformation

Illustration of Typical Elements in Digitally Enabled Companies

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.

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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 efforts¹³.

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 progress¹⁴. 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 adoption 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 **212,795,997 DVDs**¹⁵.

The amount of data created by IoT devices is projected to grow at a **28.7% CAGR** up to 2025¹⁶.

Data-driven companies are **23x** more likely to acquire customers¹⁷.

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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:

Loss 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.
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Consequences of not embracing Digital Enablement

Lower Productivity Companies failing to adopt digital enablement in work processes (such as automation and workflow 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 customer 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.
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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

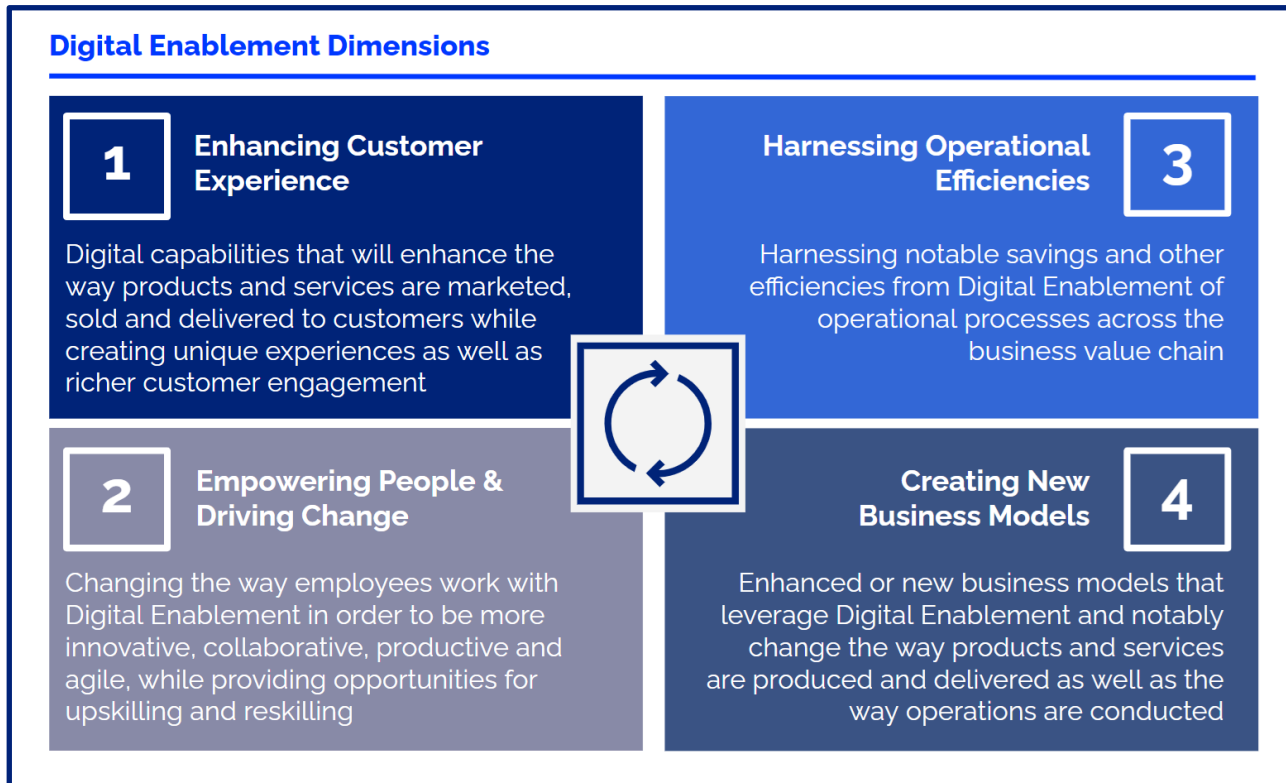
- Toys "R" Us**
In March 2018, Toys "R" Us announced that it is closing down its business in the United States after 70 years. One of the reasons that led to the demise was its inability to adapt to a new model where digital interactions have to be combined with physical retail to create a unified omni-channel experience. Read more [here](#).
- Borders Group**
Borders opened its first bookstores 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 file sharing and Barnes & Noble. Read more [here](#).

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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.

2.1 Customer Experience in the Digital Age

The phrase 'customer is always right' takes a new turn in the digital age³⁵. With the advent of new ways of delivering products, services and value through Digital Enablement, companies have managed to create unique, enhanced or even new experiences that many consumers didn't know existed or even wanted in the first place! Customer centricity remains paramount for competitive advantage and embracing Digital Enablement not only provides access to a broader spectrum of customers, but also elevates the ability to meet the ever-changing customer needs in this digital age³⁶. Customer experience is generally made up of the following attributes³⁷:

Reliability - the product or service provides the features, quality and security as promised	Availability - the product or service is available for use or consumption as promised
Fulfillment - the product or service is deployed/delivered to the customer at the time and in the state as promised	Personalisation - the product or service provides adequate level of customisation to suit the specific customer needs
Support - customers have a seamless ability to engage with suppliers/providers for feedback, queries and complaints	Resolution - Customer issues and queries are resolved in an effective and efficient manner
Information & Engagement - Customers are able to get the necessary information on the product or service easily and proactively	Empowerment - Customers are provided with the facilities and resources for better decision making, self management and customisation of product or service features

"By 2023, the 50% of retailers that have linked self-service technology strategy to digital transformation will see a 3% increase in net margin, 10% increase in customer loyalty, and 5% decrease in staff turnover" IDC.

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

2.2 Understanding Customer Needs

The ability to create unique customer experiences is anchored on the understanding of customer needs and behaviours. Digital Enablement has provided many avenues to harness more and more data which provide invaluable insights into customer behaviours and needs. The basic principle is the more you understand about your customers, the more accurately you can predict what they want and deliver in the way that is most convenient to them³⁸.

73% of customers expect companies to understand their unique needs and expectations ³⁹	81% of customers have shopped across at least three or four channels over the past six months, with more than half shopping daily or weekly ⁴⁰
86% of customers are likely to continue to shop online/ by phone when social distancing measures are restored ⁴¹	56% of customers expect offers to always be personalised ⁴²
69% of customers are open to the use of AI to improve their experiences ⁴³	43% of customers prefer non-digital Channels. Satisfying customers generally requires great experiences both online and offline ⁴⁴

Gen Z vs. Baby Boomers: 1.6x more likely to prefer engaging through digital channels⁴⁵

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

2.3 Hyper-Personalisation & Omnichannel Experience

Hyper-personalisation and Omnichannel platforms provide interrelated digitally enabled approaches to create an effective ecosystem to meet the changing needs of consumers in the digital age:

What is Hyper-Personalisation and Omnichannel?

Omnichannel is a cross-channel content strategy used to improve customer experience and drive better relationships across all possible channels and touchpoints. This includes traditional and digital channels, point-of-sale, and physical and online experiences⁴⁶.

Hyper-personalisation takes personalisation to the next level by utilising the power of Artificial Intelligence and real time data to create and create highly unique and personalised products, services and overall experiences to customers⁴⁷.

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

2.4 Digitally Enabled Customer Engagements

Digital customer communication or engagement refers to the communication sent by companies to its customers via digital channels such as text messaging, email, instant chat, app notifications and other similar mediums⁴⁸. Digital communication lies in the heart of creating a unique customer experience and Digital Enablement has changed the landscape of interacting with customers in many ways including⁴⁹:

Chatbots reduce the need for human intervention in customer service	AI-Driven chat centers eliminate the gap between online and offline customer service	Social networks have become a standard customer service channel	Message management allows companies to merge its social communication channels into one inbox for quicker response time
Canned emails are automated responses where digital templates are created for the most common customer inquiries and used to provide faster feedback	Social media monitoring allows companies to obtain customer feedback and to be able to evaluate customer sentiment	Triggering FOMO with Social Proof happens when individuals conform to the opinions of larger groups of people which can be used to build trust and credibility for companies	Personalised email marketing and customer support engage leads, turn them into paying customers, and build long-term relationships
AI Backed email support will read emails and analyse issues, infer user emotions to enable companies to better problem solve via the right customer support interventions			

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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 recognized that as their businesses expand, regionalize and globalize, 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 demands¹.

Examples

Scotiabank - A low-cost carrier won Best in 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.

What is a mobile workforce?

Source: <https://www.pwc.com/au/en/issues-and-trends/digital-transformation/what-is-a-mobile-workforce.html>

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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 options¹. This in turn has also accelerated innovation amongst the workforce as Digital Enablement catalyses ideation, advocacy & screening, experimentation, commercialisation, diffusion & implementation². The following section provides further considerations on how Digital Enablement can empower people to make better decisions and drive innovation.

Decision Making through Digital Enablement³

Data Driven Decision Making (DDDM⁴) 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 Treestyle 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](#).

Source: <https://www.pwc.com/au/en/issues-and-trends/digital-transformation/coca-cola.html>

Digitally Enabled Decision Making

Data Gathering → Data Visualization → Identifying Alternatives

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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 including¹:

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.

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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 work styles, the future of work requires people to be upskilled and/or reskilled to be relevant to the needs of the workforce of the future¹. 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:

- [How to Upskill Employees with Digital Skills](#)
- [Upskilling and Reskilling Employees in the Digital Age](#)
- [How PwC Upskilled 284,000 People](#)

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](#).

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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.

Introduction | Enhancing Customer Experience Through Digital Enablement | Empowering People & Driving Change Through Digital Enablement | **Harnessing Operational Efficiencies Through Digital Enablement** | Creating New Business Models Through Digital Enablement | Implementing and Optimising for Digital Enablement | Conclusion

Operational Efficiency | Resilient Digital Enablement | Measuring Operational Performance | Transforming Core Operational Processes | Managing Human Capital | Streamlining Back Office Functions | Enhancing Safety and Security | Call to Action & Next Steps

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 efficiencies⁵⁸, which then 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

Introduction | Enhancing Customer Experience Through Digital Enablement | Empowering People & Driving Change Through Digital Enablement | **Harnessing Operational Efficiencies Through Digital Enablement** | Creating New Business Models Through Digital Enablement | Implementing and Optimising for Digital Enablement | Conclusion

Operational Efficiency | Resilient Digital Enablement | Measuring Operational Performance | Transforming Core Operational Processes | Managing Human Capital | Streamlining Back Office Functions | Enhancing Safety and Security | Call to Action & Next Steps

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 the very near future⁵⁹:

ESSENTIAL EIGHT TECHNOLOGIES

CONVERGENCE

Extended Reality	Automating Talent	Immersion Interfaces	Working Autonomously	Digital Reflection	Hyperconnected Networks
AR and VR are being used as job aids and for training while VR simulation environments for users to practice soft skills are gaining traction. AR technologies XR enable workers to practice even risky tasks in safe, realistic way.	Blockchain, IoT and AI work together to verify the authenticity of data, verify identities and enable secure transactions that protect supply chains from physical, digital and human assets.	Immersion interfaces enable more natural and fluidness communication between people and digital environments. By enabling and enhancing movement, brain waves and behaviours allowing users to fully interact with the physical/digital world.	Multiple machines are developing, integrating and autonomously systems into the value chain. Intelligent automation systems and AI-enabled machines are automating everything from tasks and behaviours allowing users to fully interact with the physical/digital world.	The ability to digitise the world around us has increased dramatically in recent years thanks to advances in self-organising, modelling and simulation. Using a virtual analytical tool, real-time scenarios can be modelled against a physical object, actions can be simulated and real-time scenarios can be modelled against an immediate outcome or flow, business decisions can be made at high-speed.	These technologies enable seamless interactions between humans and autonomous systems. Billions of self-connected devices are communicating with the cloud. AI and machine learning can make stable, high-speed, low-latency networks that serve as the backbone of larger-scale infrastructure, making connectivity omnipresent.

While 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

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Operational Efficiency | Resilient Digital Enablement | **Measuring Operational Performance** | Transforming Core Operational Processes | Managing Human Capital | Streamlining Back Office Functions | Enhancing Safety and Security | Call to Action & Next Steps

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 expeditiously and more reliably. The following are some considerations on how companies can use Digital Enablement to identify certain operational inefficiencies⁶⁰:

- 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 for 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 follows⁶¹:

Automated data collection functions and process mining built into business applications, websites and mobile apps	Sensors that collect data from operational services, industrial equipment, vehicles and other machinery	Collection of data from information 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 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

Introduction | Enhancing Customer Experience Through Digital Enablement | Empowering People & Driving Change Through Digital Enablement | **Harnessing Operational Efficiencies Through Digital Enablement** | Creating New Business Models Through Digital Enablement | Implementing and Optimising for Digital Enablement | Conclusion

Operational Efficiency | Resilient Digital Enablement | Measuring Operational Performance | Transforming Core Operational Processes | Managing Human Capital | Streamlining Back Office Functions | Enhancing Safety and Security | Call to Action & Next Steps

3. Robotics and Drone technology - Improving core operations productivity⁶²

Robotics improves the overall efficiency of a manufacturing process by creating efficient means of competing 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.

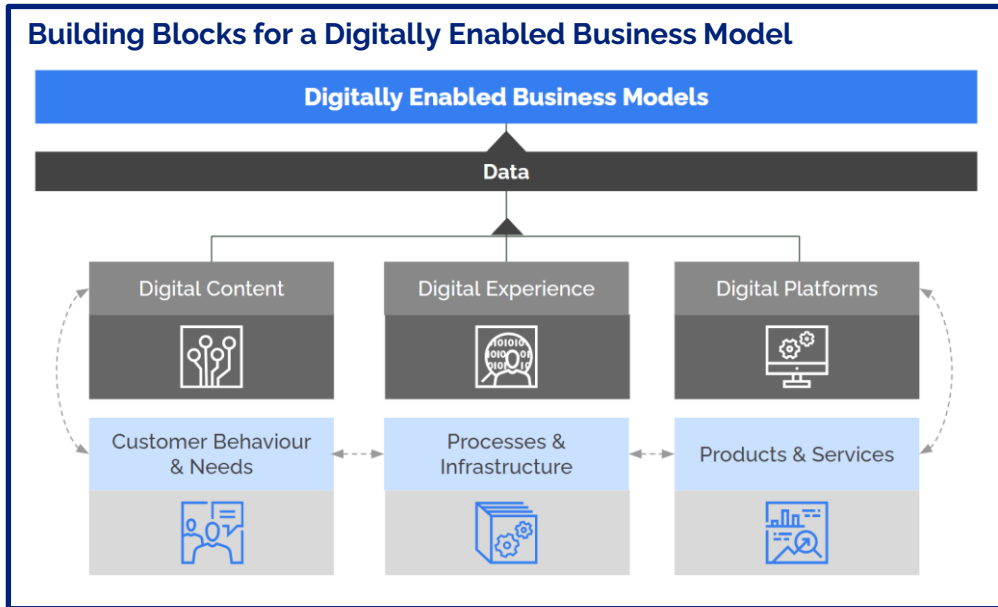
Boosting efficiencies with robots
DHL implemented the use of Locus Robotics' robots in their warehouses to speed up picking products and track productivity levels of the staff in real-time.

PLCT GUIDEBOOK 4: Being Digitally Enabled 67

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.



5.1 New Business Models in a Digital World

Digital Enablement has clearly demonstrated huge benefits in the three critical areas of customer experience, empowering people and operational efficiency. The combination and convergence of these three elements, augmented by innovation and creativity, have enabled new business models to be defined and successfully deployed disrupting the way business is conducted.

These new digitally enabled business models have provided an avenue for new or incremental revenue streams, opened up access to new segments of customers, shaped customer behaviour, created new demands for products and services that didn't exist in the past and therefore shaped the workforce, workplace and workplaces in many companies.

There are many factors that are driving the transformation and disruption of traditional business models through Digital Enablement including the following:

- The advent of digitalisation, digitalisation and digital transformation have created (and continue to create) new and improved ways to produce and deliver products and services across the business value chain.
- The quest for higher profitability (and in some cases maintaining profitability) in a more competitive business environment has resulted in companies embracing Digital Enablement to drive efficiencies across their businesses.
- The quest for new revenue streams and markets has driven innovation using Digital Enablement to deliver and serve traditional products and services in innovative ways.
- The Covid-19 pandemic has accelerated the adoption of digital adoption across business and society while shaping new consumer behaviours. Companies need to embrace these digital adoption trends in their products and services portfolios to be successful.
- Geopolitical shifts have necessitated the adoption of Digital Enablement by companies with regional and global reach to be relevant to their markets and stakeholders.
- Digital Enablement has levelled the playing field between businesses and has created a marketplace in which large enterprise and smaller businesses can compete competitively.

5.2 Creating New Business Models with Digital Enablement

The business models highlighted above make use of Digital Enablement in different ways. The following sections provide an elaboration on these business models, examples to illustrate the respective model and finally some considerations and indicative metrics for companies that intend to embark on these or similar digitally-enabled models:

5.2.1 Freemium Model

The freemium model is generally used in two ways, either the business offers a service for free and the user then becomes the product that is being sold, or users get free access to a basic, often limited version of the product with the option to upgrade to the paid version Premium. A good example is Spotify where everyone can use the service for free (and get advertisements) but when more features and higher quality is desired, a monthly subscription is required.

Examples

Freemium Model Freemium is a combination of free and premium. It is a business model where a core service is offered for free, and a premium version is offered for a fee. This model is often used for software, mobile apps, and digital content.	Subscription Model The subscription model is a business model where customers pay a recurring fee to access a product or service. This model is often used for software, streaming services, and physical products.	Usage-based Model The usage-based model is a business model where customers pay for a product or service based on their usage. This model is often used for cloud services, utilities, and transportation.	Pay-per-use Model The pay-per-use model is a business model where customers pay for a product or service based on their usage. This model is often used for cloud services, utilities, and transportation.
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These business models can work on an standalone basis or in combination to create further unique value propositions. It must be emphasised that as Digital Enablement and customer behaviours evolve, new and unique business models will continue to develop and companies should keep abreast of these developments.

5.2.2 Premium Model

The premium model is generally used in two ways, either the business offers a service for free and the user then becomes the product that is being sold, or users get free access to a basic, often limited version of the product with the option to upgrade to the paid version Premium. A good example is Spotify where everyone can use the service for free (and get advertisements) but when more features and higher quality is desired, a monthly subscription is required.

Examples

Freemium Model Freemium is a combination of free and premium. It is a business model where a core service is offered for free, and a premium version is offered for a fee. This model is often used for software, mobile apps, and digital content.	Subscription Model The subscription model is a business model where customers pay a recurring fee to access a product or service. This model is often used for software, streaming services, and physical products.	Usage-based Model The usage-based model is a business model where customers pay for a product or service based on their usage. This model is often used for cloud services, utilities, and transportation.	Pay-per-use Model The pay-per-use model is a business model where customers pay for a product or service based on their usage. This model is often used for cloud services, utilities, and transportation.
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Considerations

A Freemium business model gains the benefit of heightened brand awareness, reduced customer acquisition costs, increased brand loyalty and is a good avenue for companies to test new products and services in the market. However companies embarking on such models should carefully consider the following aspects:

- Potential for free conversion rate:** In the basic, free product may already provide adequate value to many users therefore reducing the attractiveness of upgrading to the premium (paid) version. Companies could consider adding high or unique generated such as advertisements, webinars to companion products or other offers to mitigate the lower than expected take up rates.
- High drop-off rate:** Businesses without clear value needs to be managed carefully as some premium customers may report to the free version or stop out completely from consuming the products or services if they find that the value derived may not commensurate with the cost. Companies may consider adding features or value added services on an ongoing basis to retain customers.
- High operations costs:** In the company may need to maintain a full budget product or service even while customers are on the free version to enable awareness, branding of premium features on demand by competitors but the high operational costs, companies can change to strategies to identify how they can reduce their product's cost without the sacrifice by conducting alternative or adding physical products, such as brand related merchandise, businesses can identify free sources of revenue to offset the costs of providing free services.

Indicative Metrics:

- Daily & Monthly Active Users
- Free to Paid Conversion Rate
- Customer Churn Rate
- Customer Acquisition Cost
- Retention Rate

Factors driving transformation and disruption of traditional business models

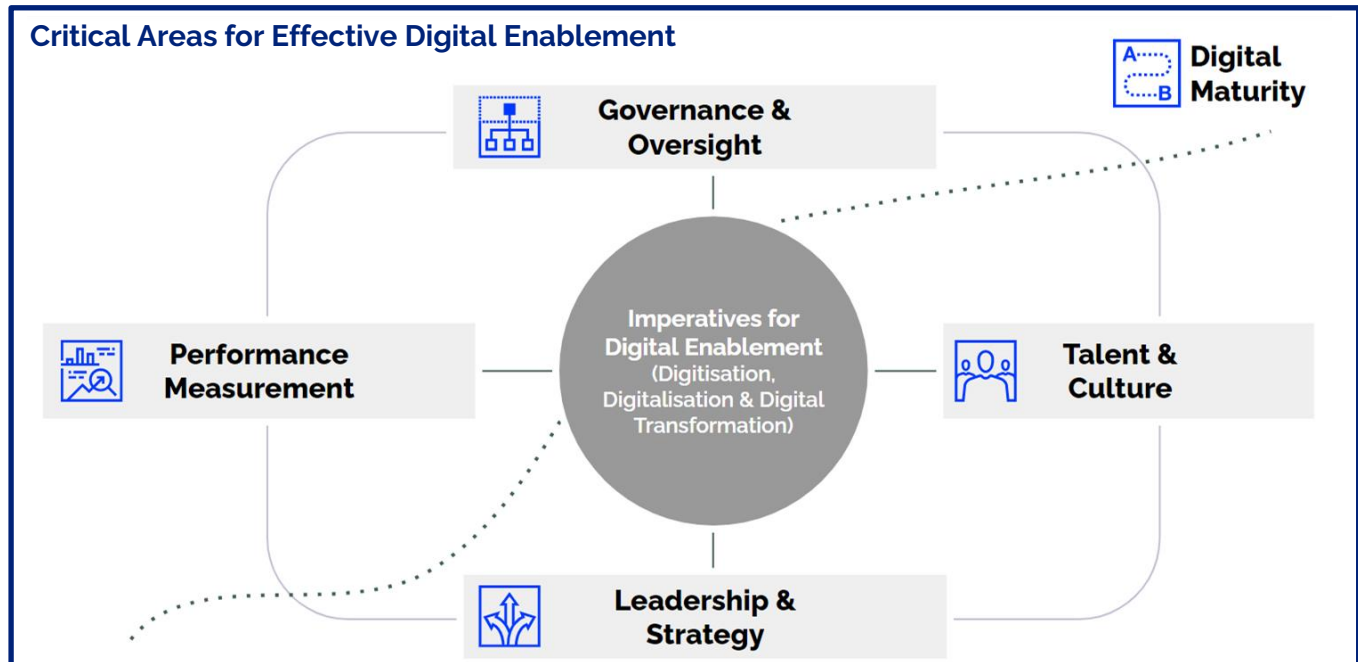
The 6 common types of Digitally Enabled business models

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

The goal of Digital Enablement is to raise a company's digital maturity to levels where it is getting optimal benefits from digitalisation, digitalisation and digital transformation. Digital maturity refers to an organisation's ability to respond and adapt to disruptive technological trends and a record of a process that is not just a goal, but a continuous undertaking throughout the organisation's life cycle as technology constantly evolves and companies adapt to these changes to remain competitive.

Key attributes:

- Business strategy
- Customers & partners
- Operations & processes
- Technology
- People & culture
- Other areas that may be specific to Operations & Nature of Business

Companies embarking on Digital Enablement, or companies which have embarked and adopted Digital Enablement are encouraged to continuously measure their digital maturity to ensure that readiness and propensity to adapt and adopt to changing digital trends. While there are comprehensive assessments that can be conducted through independent consultancies in the field, companies may want to start by conducting simple self-assessments using the many resources available online.

6.3 Governance & Oversight

Digital governance is a framework for establishing accountability roles, and decision-making authority for an organisation's digital presence. This includes but is not limited to its websites, mobile sites, social channels, and any other internet and web-enabled products and services as well as the underlying enablers for its digital presence such as data, technology platforms and connectivity infrastructure.

The components of a digital governance framework encompass those areas which are commonly found in enterprise governance frameworks (see PLCT Guidebook on Enterprise Governance) with a focus on Digital Enablement such as:

- Digital Strategy
- Digital Policies, Standards and Guidelines
- Digital Processes
- Digital Terms and Accountability

The following diagram outlines the key areas that companies need to keep in mind as they set up strong governance oversight for their Digital Enablement journey.

Key areas for a strong governance oversight:

- 1. Define & Connect from the Top:** The Board and senior management (executive) sets the vision, strategy and objectives for the digital enablement journey. This includes defining the digital enablement strategy, identifying the key areas of focus, and ensuring that the digital enablement strategy is aligned with the overall business strategy.
- 2. Digital Enablement Roles and Responsibilities:** The digital enablement strategy is broken down into specific roles and responsibilities for each level of the organisation. This includes defining the roles and responsibilities of the digital enablement team, the digital enablement steering committee, and the digital enablement working groups.
- 3. Focus on Cybersecurity, IT & Data Governance as a Foundation:** Cybersecurity, IT and data governance are the foundation of digital enablement. Companies need to ensure that their digital enablement strategy is built on a strong foundation of cybersecurity, IT and data governance. This includes defining the cybersecurity, IT and data governance strategy, identifying the key areas of focus, and ensuring that the digital enablement strategy is aligned with the overall cybersecurity, IT and data governance strategy.

6.7 Accelerating Digital Enablement

The evolution of technology solutions and delivery mechanisms provide companies with opportunities to accelerate digital enablement without significant upfront capital outlay and with lower risks. Companies embarking on Digital Enablement initiatives should consider the following approaches to fast track their efforts.

Fast Tracking Digital Enablement

Software As A Service (SaaS)/Software With A Service (SWaaS):

- SaaS is a software licensing and delivery model in which software is licensed on a subscription basis and centrally hosted. As such, there is no upfront development cost required for companies choosing the approach and companies can implement & scale much more rapidly. However, a critical list of companies are listed on the SaaS list that can be used to identify the most suitable SaaS for your organisation.
- SaaS similarly offers software licensing with the addition of managed services that are usually available for companies to obtain vendor's guidance on the software usage, maintenance and adoption.

Advanced and Partner Ecosystems:

- The scale and complexity of implementing digital enablement for companies are some of the reasons why companies are looking for advanced and partner ecosystems. These partnerships and ecosystem partners include technology providers, industry associations, and higher project delivery partners and customer advocates.
- Partnership ecosystem planning and designing, to developing and maintaining the solution, major project beneficiaries.

Outsourcing / Co-sourcing:

- Companies looking for outsourcing or co-sourcing to facilitate more sophisticated offerings. These services include customised industry solutions and advanced digital technologies such as AI and analytics. The benefits of outsourcing or co-sourcing include:
- Access to skilled resources without the need to source for these scarce resources in-house.
- Integration of data is accelerated to understand the challenges and can overcome them proactively.
- Cost effectiveness and higher security.

Employee Enablement:

- A firm's ability to provide offers a credible and comprehensive range of digital enablement within one or many technology domains.
- Large talents of skilled technology and product professionals, a supportive end-user experience by providing enabling, customer and product environments for each stage of digital enablement and services.

6.8 Common Pitfalls to Avoid in Digital Implementation

As companies embark on broadening their digital footprint within the organisation and across the business landscape, there is a real risk that many such initiatives will fail, leading not only financial loss, but also lost opportunities due to the highly competitive environment. The following checklist provides a non-exhaustive list of key areas that companies should consider to minimise the risk of failed digital efforts.

COMMON PITFALLS TO AVOID IN DIGITAL IMPLEMENTATION

<p>Do not adopt technology for the sake of technology</p> <p>Digital transformation is not just about the technology, it's about the business value. Companies should focus on the business value that the technology can bring, rather than just adopting technology for the sake of technology.</p>	<p>Digital transformation is not a one-off effort</p> <p>Digital transformation is a continuous process that requires ongoing investment and attention. Companies should view digital transformation as a long-term strategy, rather than a one-off project.</p>	<p>Do not just adopt the IT Department</p> <p>Digital transformation affects the entire organisation and not just the IT department. Companies should ensure that digital transformation is a cross-functional effort, involving all departments and business units.</p>
<p>Do not spend money on things that are not needed</p> <p>Digital transformation can be a costly process, but it's important to focus on the areas that will bring the most value. Companies should avoid spending money on things that are not needed or that will not provide a clear return on investment.</p>	<p>Do not just talk about coding as much as you can</p> <p>Digital transformation is not just about coding, it's about the business value that the technology can bring. Companies should focus on the business value that the technology can bring, rather than just talking about coding.</p>	<p>Employee Enablement is not a one-off effort</p> <p>Employee enablement is a continuous process that requires ongoing investment and attention. Companies should view employee enablement as a long-term strategy, rather than a one-off project.</p>

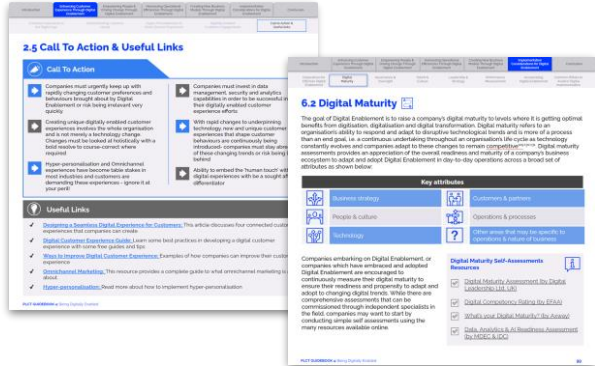
Articulates key attributes required in each critical area for effective Digital Enablement

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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