

Sofigate
White Paper

WHAT IS BUSINESS TECHNOLOGY?

SOFIGATE



“Business technology turns digital innovations into well managed information technology and vice versa in every corner of business.”

FOREWORD

THIS WHITEPAPER DISCUSSES and explores the benefits that can be realized when the management of Information Technology is truly integrated across the business. This not only enables or supports the business, but is a new core element that is driving new business opportunities. We describe the Information Technology used across the enterprise as Business Technology.

The ongoing business revolution forces all organisations to constantly look for ways to apply or leverage technology with the goal of improving the value delivered to customers. When you consider how technology is currently managed and leveraged in your organisation, do you think you could benefit from a more integrated and innovative approach? Ask yourself, am I applying technology in the most effective way possible to deliver customer value?

In today's business world, Information Technology penetrates organisations from an increasing number of angles, for example, through new customer facing digital services and the digital advances in products and operations. This trend will continue to accelerate, meaning an organisation's traditional IT department can no longer act as the only gatekeeper to an organisations

technology. This trend also presents a fantastic opportunity to leverage IT management practices directly in the business teams where it can have the largest impact. In many organisations, there is no real cooperation between the business and IT that would enable greater business outcomes. To overcome this, business leaders must ensure that a culture of cooperation is embedded within the organisation so that Information Technology management skills are applied in equal measure across all business units.

This shifting landscape demands that your business is organised in a way that allows you to maximise business potential, reacting rapidly to opportunities, and driving continuous improvement and change.

Ultimately, this white paper focusses on the creation of value within your business by addressing the integrated Business Technology function. ■

Warmest Regards

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EXECUTIVE INTRODUCTION

BUSINESSES, REGARDLESS OF sector, are living, breathing and operating in an environment where Information Technology is changing the landscape around them, transitioning from the back room of an organisation into the hands of customers, employees and society.

Traditional operating frameworks and models are unable to support the new era that is driven by business and customer needs. Vastly reduced development cycles, disruptive business models and increased market competition are highlighting the ever increasing critical role of Information Technology in businesses. Business leaders face progressively more dynamic and fluid markets. As new value is created in these disrupted markets, business planning and forecasting success is heavily reliant on the successful exploitation of technology.

Harnessing Information Technology to create value has become a necessity which, in turn, has led to an explosion of technology enabled products. Technology is now likely to be found in many, if not all business areas. Current statistics show that only 60% of IT spend is now owned by IT departments, which means that 40% is found in areas that do not necessarily have the skills to effectively realise the potential or understand how to manage it appropriately.

Much has been written about how business expectations and requirements towards the IT function have undergone a radical shift within a relatively short period of time. IT functions need to become more dynamic, and fluid in their organisation, ready to shift focus and repurpose resources at a moment's notice. There is a growing need for more flexible and agile ways to affect the rate of change, and this, in turn has created new challenges for IT functions.

However, the answer to these challenges is not just to enhance your IT or digital capability; organisations must build multi-disciplined teams from across the business to ensure all organisations skills are brought to resolve these new challenges.

Business Technology is designed to guide organisations and to include their use and application of Information Technology across all business areas. It delivers best practice guidance to IT functions and, crucially, it ensures that other business areas continue to increasingly exploit technological advances. Above all the goal is to ensure a holistic approach is taken to deliver customer value, and to develop and sustain business agility. ■

¹ <https://home.kpmg.com/content/dam/kpmg/no/pdf/2017/cio-survey-2017.pdf>

BACKGROUND – THE RISE OF DIGITAL

AS TECHNOLOGY HAS advanced over the last 10 years, a number of phenomena have emerged that, when combined, have rapidly and radically transformed the ability of businesses to construct customer services and products. Most importantly, the speed at which innovation and incremental improvement can occur has also increased.

We label these phenomena the disruptors, briefly these are described as:

- The internet and its ability to connect everyone and everything
- The remarkable and continuous drop in the cost of raw computing power leading to accessibility for all
- The consumerisation of technology – most people use sophisticated technology daily
- The explosion of data and powerful analytics – decisions can be made more accurately and quickly

These disruptors combined create what has commonly been understood as digital. It is important to note that digital is much more than the application of new technology channels such as web and mobile. It brings a customer focus that requires significant cultural change, which takes time to embed.

Our model of 5 dimensions of digital maturity encompasses both technological and cultural elements, allowing a measure of how one should build a truly digital organisation.

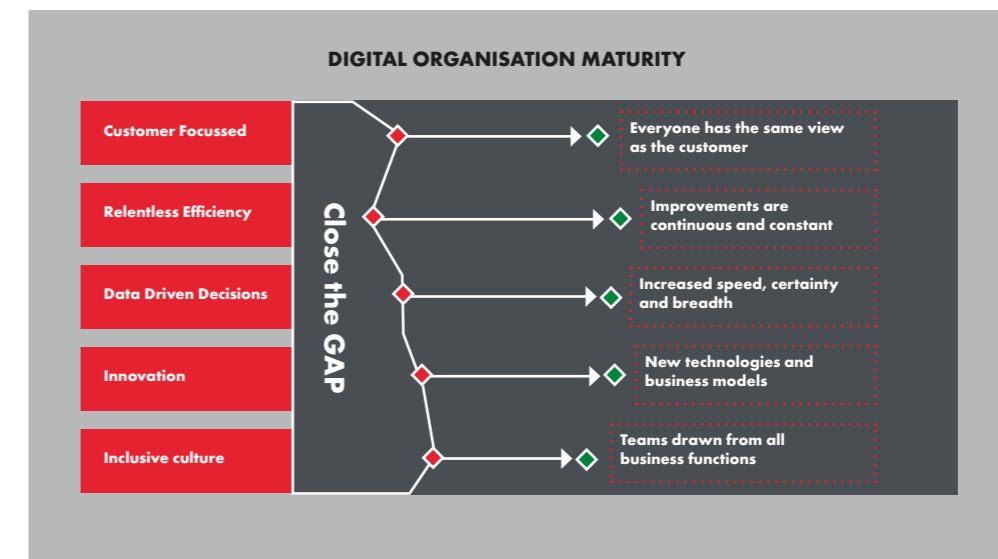


Figure 1 – Example maturity curve for digital organisations – Note desirable end points vary by industry

Organisations that have successfully applied digital have released new business models, shaped their operations and driven consumer needs and expectations. Often this process has been driven by the customer demanding a digital experience, and who are willing to follow those companies that meet their expectations. Organisations that are behind the curve are finding out that their competitors are using digital against them, driving competitive advantage and succeeding better in delivering customer value. ■

A high-angle photograph of three business professionals sitting in a modern office lounge. They are seated in three red armchairs arranged around a low, dark wooden table. The man on the left is pointing at a laptop on the table. The woman on the right is looking at the laptop. The woman in the foreground is looking at a tablet. The lounge is situated on a light-colored tiled floor next to a large, triangular planter filled with light-colored pebbles. A red handrail is visible in the foreground and background. The overall atmosphere is professional and collaborative.

“Digitalisation is the use of Information Technology to introduce new customer focused business models and provide new revenue and value-producing opportunities; it is the process of moving to a digital business and is on the increase on a massive scale.”

WELCOME TO BUSINESS TECHNOLOGY

IN THIS WHITEPAPER, we introduce a new meaning for Business Technology, borne from our experience working closely with clients, our own observations and built upon our history of investing in best practice IT management know-how.

Business Technology is a strategy for organising and coordinating technology management across the entire enterprise. It is a set of management practices, tools, organisational structures and technology governance designed to ensure that the use of technology is optimised across the enterprise with the overarching aim of satisfying customer needs and expectations.

Most businesses understand that they need to challenge not only their competitors but also themselves in order to constantly improve their customers view and their ability to meet market demand.

When Information Technology was introduced to businesses over 30 years ago, it was such a specialised topic that organisations created new departments with the remit and responsibility for managing it. This resulted in the birth of the IT department, which was seen by many as a pure support function and separate from the business. Large amounts of effort have been spent since in trying to “contain” IT, ensure that it is under the watchful eye of IT teams and that spend is controlled. Of course, cost control is still a major required discipline, however Digital has unleashed technology and made it widely available, meaning it can no longer be efficiently controlled by a single department. Many business organisations are still stuck in the belief that the IT Department should be in control whereas the reality is that a broader range of skills are now needed.

Today’s IT departments still directly manage significant portions of Information Technology. However, they also work alongside all business areas to make their skills available, whilst embracing those disciplines of customer focus, revenue generation, and product development from other parts of the organisation. This is not a one-way conversation – marketing teams, for example, need to embrace the technology management skills available to them from to prevent runaway cost or implementation of solutions that cannot interact with others across the internal eco-system.

In the early phases of digital, initiatives were implemented by isolated teams and functions primarily with an aim to grow the business. These initiatives were unconstrained by the inconvenience of limited legacy technology, and were often products of blue-sky thinking. At the same time, traditional operational and IT teams continued to focus heavily on reducing cost and embedding operational excellence, constrained by the realities of legacy.

Over time, the emergence of digitalisation as a standard has focused businesses to realise that the digital and traditional worlds are not mutually exclusive. Digitalisation also mandates a new customer focused way of working and requires the adoption of a new mindset.

² Note Business Technology refers to the use of information technologies, not wider technology types for example, chemical, engineering, green and financial instruments.

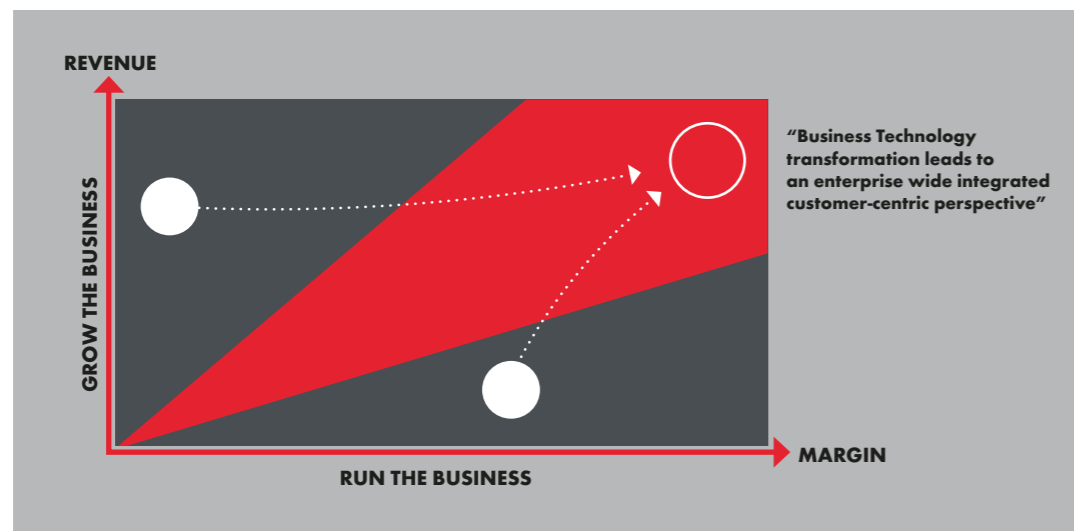


Figure 2 – Business Technology brings both digital and traditional worlds together

Digitalisation has created a new crossroads for many organisations. Business publications are full of stories about disruptive companies and how they have revolutionised markets, and, in some cases, have established new markets. Uber, Airbnb, Netflix, Google and Apple are some familiar examples.

We have seen that many organisations and entities have found themselves in limbo – somewhere between the digital revolution and the status quo. They lack the capability to integrate incremental improvement with disruptive digital innovation.

To help frame the challenge, Business Technology introduces three core elements:

1) BUSINESS CAPABILITIES AND TRANSFORMATION

Emerging technologies are accelerating digital transformation, requiring business and process development and a forward-looking governance.

Business capabilities are the sum of all processes and assets within the company, and comprise the entire business organisation, including any supporting functions within the organisation. Business capabilities are the key for developing the business and to utilising technology in the best possible way.

Business Technology does not seek to rearrange or redistribute these capabilities; the framework can be overlaid on top of any organisational structure.

Transformation comprises of the parts and processes of an organisation that are engaged in improving business capabilities. Business Technology seeks to enhance, strengthen and support transformation activities.

2) DIGITAL FRONTLINE

Digitalisation provides new business opportunities, and requires consistent design thinking on how to face customers, partners and employees in a networked multi-channel world.

The Digital Frontline can be defined as any digital means that connects the company to the user and is visible to the user, whether the user is a customer or a partner, or whether the customer is internal or external. Customer experience is at the heart of all Digital Frontline activities. Digital Frontline is a crucial area as it is the very area where the emerging business focus and growth possibilities reside and where digital transformation happens through speed and agility. Digital apps and web, as well as digital enterprises, enable the creation of new business possibilities around customer experience, digital business and Internet of Things (IoT) services.

3) TECHNOLOGY BACKBONE

Traditional IT needs to become the Technology Backbone that is responsible for development, and management of digital and administrative solutions in a professional way.

The Technology Backbone consists of all IT systems and processes that support the running of the businesses operations, through the management of end-user services, plus enterprise and business applications. It is where the essential business focus of a company resides, and the purpose is to provide operational efficiency to the company through reliability, security and scalability.

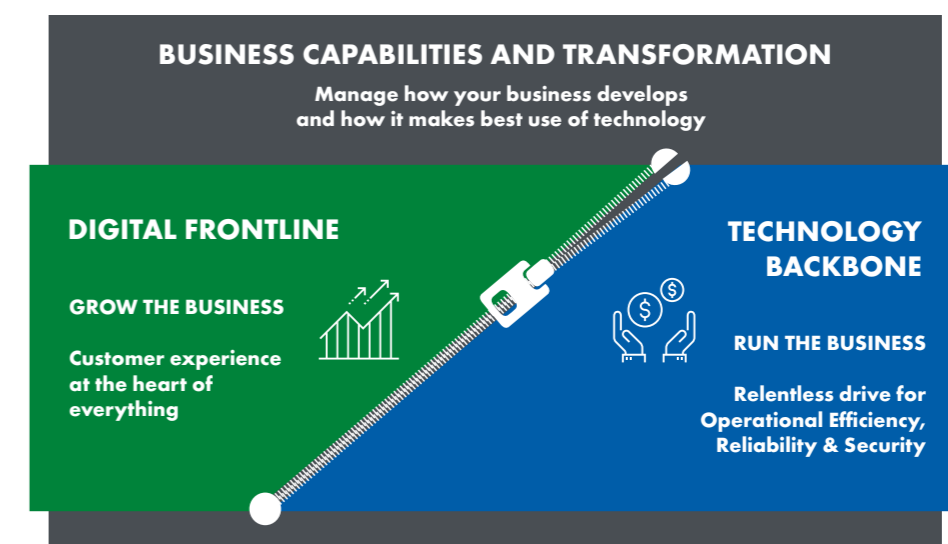


Figure 3 – The Business Technology Model

It is vital that these elements are interconnected, and therefore Business Technology focuses on how all three elements of the model integrate and interoperate. Without all the pieces in place, the picture can never be complete. Most importantly, without all the pieces tightly integrated, an organisation's performance can never reach its full potential.

With the passage of time and the benefit of hindsight, the need for holistic, integrated Business Technology elements has become obvious. The most effective and innovative businesses are those that grasp the need for cooperation and communication within a holistic Business Technology organisation. The leaders of digitalisation (e.g. Chief Digital / Marketing Officer) need someone to source and manage 24/7 services, the CIO needs someone to prioritise and run digital development initiatives from a business perspective, and the business needs new digital solutions that provide reliable services enabling the business to build the capabilities and to execute transformation initiatives. When successfully implemented, the Business Technology Model is far greater than the sum of its parts. ■

BUSINESS TECHNOLOGY – INTEGRATING INFORMATION TECHNOLOGY WITH BUSINESS

THE BUSINESS TECHNOLOGY Model understands and celebrates the fact that technology exists within many areas of the enterprise today. Often this technology is outside of the influence of the traditional CIO and IT function. Every business is different and the type, location and amount of technology will rightly vary within each area.

We define four distinct categories of technology:

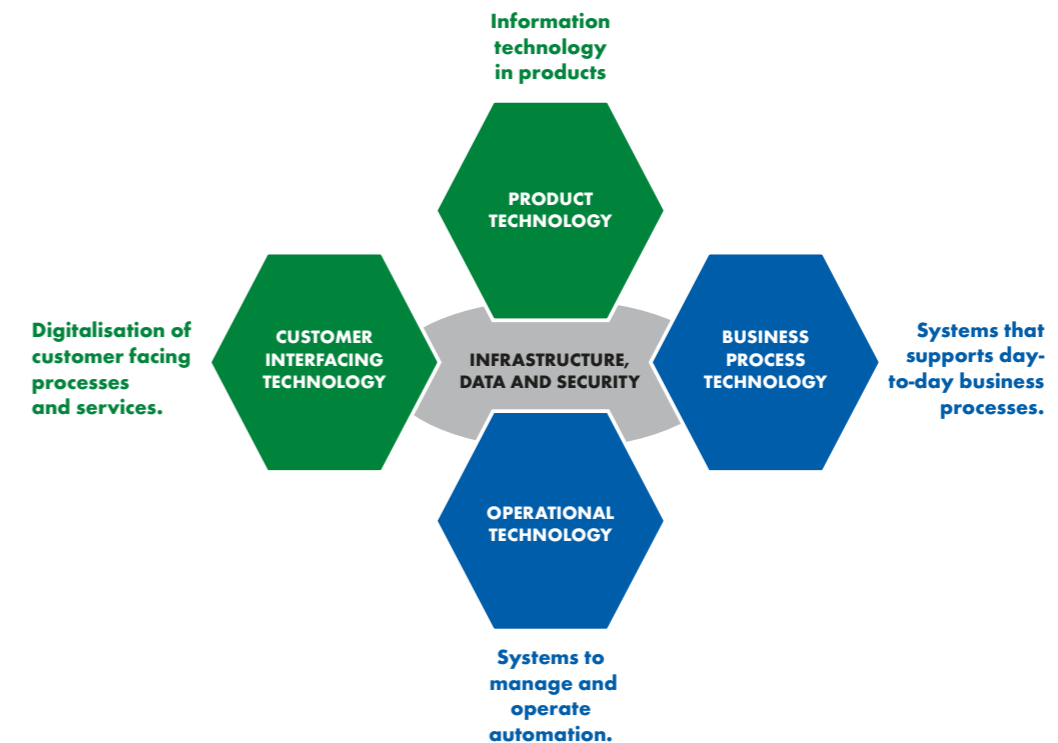


Figure 4 – Business Technology Ecosystem

Each of the four business areas contain a wide variety of technologies, some overlapping and some discrete. These are underpinned by Infrastructure, Data and Security. In the next section, we describe the types of technology in use within each area.

CUSTOMER INTERFACING TECHNOLOGY

The key characteristic of this technology type is interaction with the customer and the technology centres around the customer experience.

Customer Interfacing Technology is all about the digitalisation of customer facing processes and services. Thus, it is in this area where digital initiatives have an obvious and direct impact. Improving or implementing these technologies drives a need to review end to end customer journeys. When these solutions are developed, the business should ensure that their strategy is not constrained to digital channels only. This constraint can be acceptable as a short-term strategy. However, as previously discussed, digitalisation is a much broader topic and needs to be viewed as a broader strategy.

PRODUCT TECHNOLOGY

This area consists of Information Technology embedded within the products the company sells: technology that can be operated, monitored and/or interfaced remotely and can interact with its environment 24/7. Thus, only the IT component of the product that fulfils this criteria can be seen as Product Technology, not necessarily the whole product itself. For example, a lawn mower itself does not fulfil these criteria, but in a robot lawnmower the embedded IT technology enabling its remote control and operation fits the Product Technology definition.

Whilst Customer Interfacing technology provides the gateway for interaction with your customers, it is often the technology within your product, whether it be a banking product, electronic goods or professional services to name a few, that provides the real value to customers. Technology innovations within this area are fast moving with new rich sources of data and new techniques such as rapid prototyping, agile development and new business models such as the “as-a-Service” model often used.

OPERATIONAL TECHNOLOGY

Operational technology contains all Information Systems used for managing, operating and monitoring automation systems and other “shop floor” systems. Information Technology is expanding into this area even more than before. Many previously low-tech or even manual operations today start with an IT enabled check, such as the servicing of a car. What used to be a purely manual operation is now assisted by Operational Technology. E.g. a laser assisted wheel alignment machine.

BUSINESS PROCESS TECHNOLOGY

Business Process Technology consists of Information Technology and solutions that are used for managing business processes and executing business transactions, i.e. systems that support day-to-day business operations. Classic examples of Business Process Technology are the Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems used in organisations.

INFRASTRUCTURE, SECURITY AND DATA

These systems form the infrastructure for providing a convenient, reliable and secure access to business data and for preventing any unauthorised use of the data. Data security and privacy is a crucial factor with Business Process Technology systems as they contain both business critical and data privacy related information. New regulation such as GDPR means that a culture of Privacy by design is a vital part of building and maintaining trust with customers

THE BUSINESS TECHNOLOGY ECOSYSTEM IN ACTION

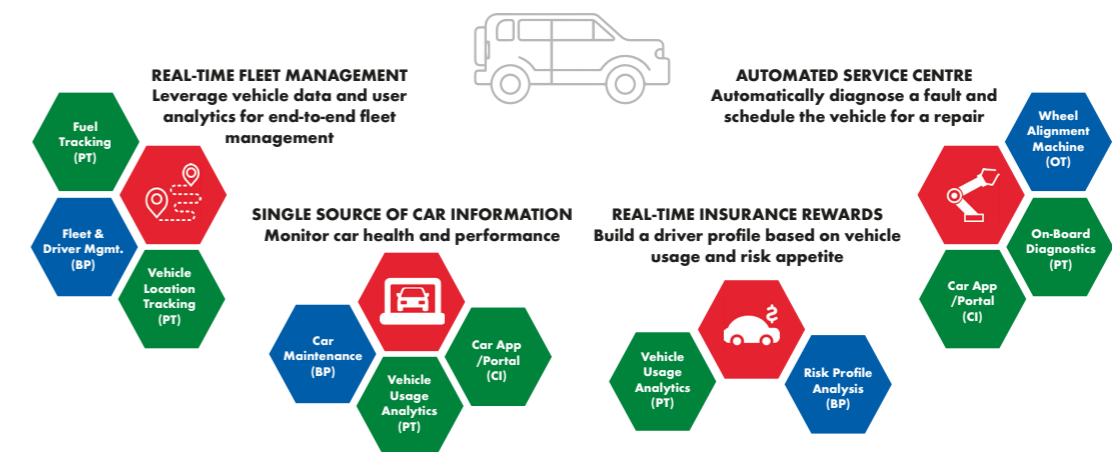
The forms of technology that every business has within the Business Technology ecosystem are interdependent, and equally important. What is unique is the bespoke way each organisation deploys, uses, and manages each form of technology within their business. The most powerful Business Technology systems interweave technologies from across all business areas to maximise the organisation’s potential.

Business Technology sets out a framework that brings these areas together, in the process strengthening and improving the business’ ability to maximise your investments. In order to visualise the improvements brought on by the integration of technologies, it is important to have a good understanding of the disruptive technologies available that can be used as tools of business process optimisation and advancement.

The value that can be generated from visualising the Business Technology ecosystem have been applied to the Automotive Manufacturing and Retail Banking examples below.

Automotive Manufacturing: Intelligent Vehicle

When a modern car is being manufactured, a large amount of data about its components and assembly details are being collected on the assembly line through Operational Technology. The car itself contains numerous sensors constantly collecting up-to-date data - an example of Product Technology. The user of the car can utilise Information Technology to access the data through the car’s information display or through a mobile app, i.e. through Customer Interfacing Technology. When the car is taken for servicing, automatic diagnostic systems read the available data and make any needed modifications, again through Operational Technology. The car’s ownership related and other commercial information can be found in the manufacturer’s, importer’s, dealer’s, servicing garage’s and government authorities’ data systems, i.e. within their Business Process Technology.



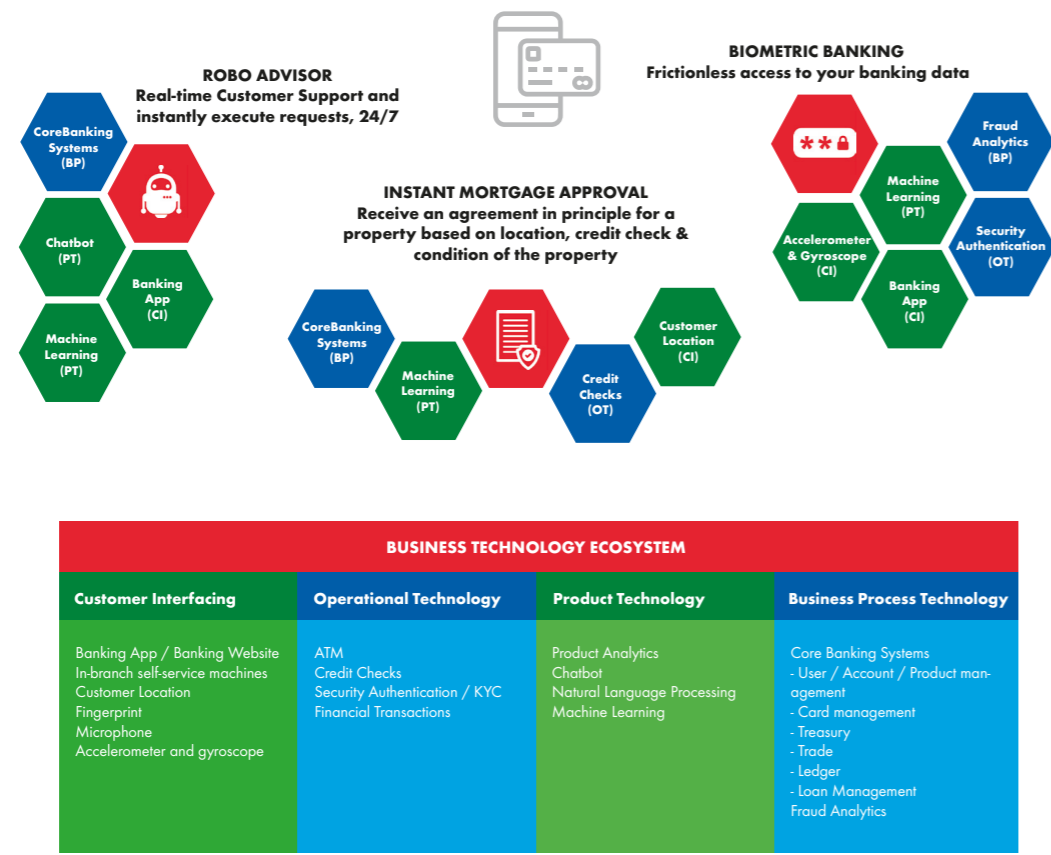
BUSINESS TECHNOLOGY ECOSYSTEM			
Customer Interfacing	Operational Technology	Product Technology	Business Process Technology
Car App (Smartphone or Tablet) Car Portal (Website) On-board Computer	Production Line Systems Crane Handles Spray Painting Robot Wheel Alignment Machine	Vehicle Usage Analytics Vehicle Location Tracking Fuel Tracking On-Board Diagnostics	Risk Profile Analysis Car Maintenance Scheduling Fleet and Driver Management

In the modern world, by combining information from various technology sources we can create completely new business applications. A car’s warranty, insurance and inspection schedule could in the future be based on the car’s usage and servicing records. A careful user might have a longer warranty, cheaper insurance and a longer period between the mandatory inspections than a user who drives recklessly. Of course, there are certain factors such as legislation related matters that currently limit combining data in the way described above, but the future direction is nevertheless clear; the integration of technology categories.

Retail Banking: Next Generation Banking Service

A bank’s Core Banking System is a Business Process Technology that is used to support the bank’s most common transactions, such as maintaining records. When a customer applies for a personal loan, mortgage or credit card, the bank will use their Operational Technology to conduct a credit check to review an individual’s financial situation and to decide if they are eligible for the product. In recent years, accessing bank products and services has become more convenient through the adoption of Customer Interfacing Technologies, such as smartphone biometric sensors and location data. Banks develop and embed innovative Product Technology in to their products, such as deploying intelligent chatbots to provide instant responses to any customer queries.

For banks to continue to differentiate themselves from one another, banks must combine multiple technologies to generate new value. For example, a customer that would like to apply for a mortgage to buy a property must first seek an agreement in principle to demonstrate to the sellers that they are eligible. To speed this process up, a bank’s smartphone app (Customer Interfacing Technology) could be used to take a photo of a property and capture the location. It will then initiate a credit check on the applicant (Operational Technology), drawing on information from external credit agencies as well as customer accounts stored in their Core Banking System (Business Process Technology). The service will then employ a Machine Learning platform (Product Technology) that will assess the property information (condition, house price / market...) and the applicant’s eligibility (loan-to-value, credit history, risk profile...).




THE DISRUPTORS

The forces mentioned at the start of this whitepaper, have in turn matured and the result of this maturation is that a number of new approaches and techniques are not only available now, but already being applied in many businesses.

This new breed of Disruptive Technologies has the power to create business opportunities and power entirely new business models. This area of technology is gaining increasing visibility, as interest is generated through the media and as customers come to expect increasing value and convenience from products and services. Most conversations surrounding digitalisation fall into this category (even though digitalisation is taking place across all the categories of Business Technology).

We have highlighted a list of disruptive technologies that have the potential to shape both industries and lives. Some businesses may not yet have or recognise an application for the use of these technologies. However, these key technologies will play a large role in established and start-up organisations alike, changing the shape of the playing field and providing boosts for market and sector evolution.


FOURTEEN POTENTIALLY ECONOMICALLY DISRUPTIVE TECHNOLOGIES



MOBILE INTERNET
Increasingly inexpensive and capable mobile computing devices and Internet connectivity.



NEXT-GENERATION GENOMICS
Fast, low-cost gene sequencing, advanced big data analytics, and synthetic biology ("writing" DNA).



AUTOMATION OF KNOWLEDGE WORK
Intelligent software systems that can perform knowledge work tasks with unstructured commands and judgments.




INTERNET OF THINGS (IOT)
Networks of low-cost sensors and actuators for data collection, monitoring, decision-making and optimisation.




ENERGY STORAGE
Devices or systems that store energy for later use, including batteries.



CLOUD TECHNOLOGY
use of computer hardware and software resources delivered over a network, often as a service.



ADVANCED ROBOTICS
Increasingly capable robots with enhanced senses and intelligence used to automate tasks or augment humans.




3D PRINTING
Additive manufacturing techniques to create objects by printing layers of material based on digital models.



AUTONOMOUS AND NEAR-AUTONOMOUS VEHICLES
Vehicles that can navigate and operate with reduced or no human intervention.




E-COMMERCE
Online commercial transactions are shaping the retail industry of the future.




ADVANCED MATERIALS
Materials designed to have superior characteristics (e.g., strength, weight, conductivity) or functionality.



ADVANCED OIL & GAS EXPLORATION AND RECOVERY
Exploration and recovery techniques that make extraction of unconventional oil and gas economical.



RENEWABLE ENERGY
Generation of electricity from renewable sources with reduced harmful climate impact.



AUTOMATION OF BUSINESS PROCESSES
Business process automation through scripting, automations and APIs.

Adopted from McKinsey & Company

THE RATIONALE OF BUSINESS TECHNOLOGY

THOSE ORGANISATIONS THAT are applying Business Technology in pursuit of aggregated technology management across the business are likely to be rewarded in many ways, not least as potential pioneers in their sector. Businesses' appetites to adopt emerging technologies vary depending on their sector. Typically, business-to-consumer (B2C) organisations strive to be the first to market and are therefore innovators or early adopters, whereas business-to-business (B2B) organisations are willing to wait until a technology has matured. However, organisations that leave it too late run the risk of being left behind. Figure 5 illustrates the adoption appetite for a variety of sectors.

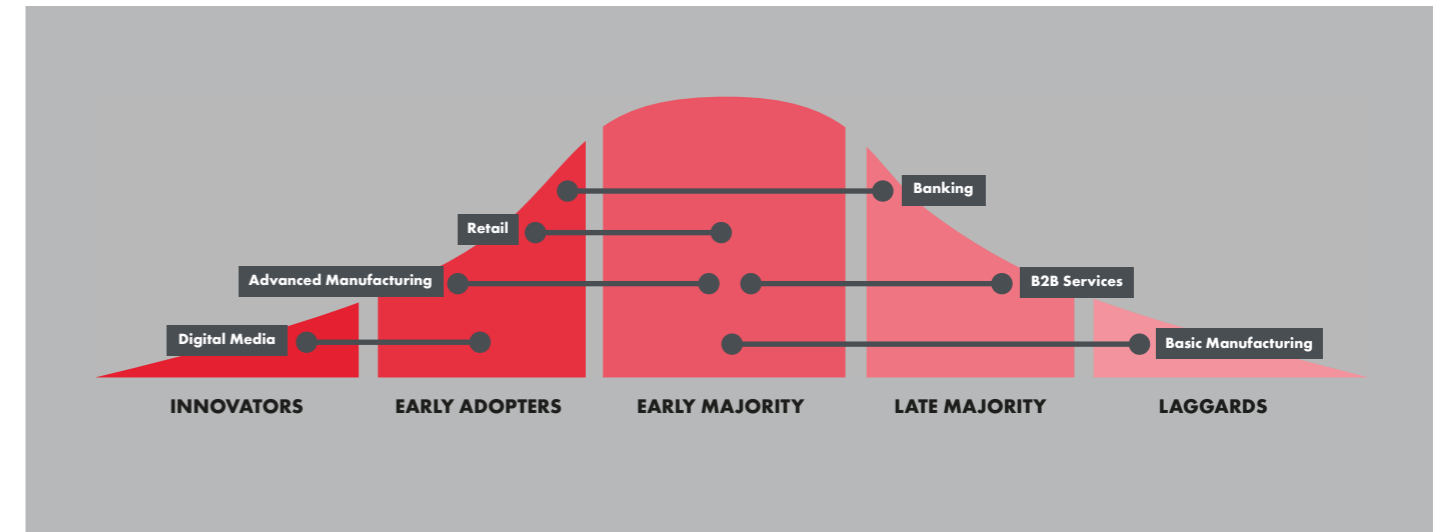


Figure 5 – Digital Adoption Maturity Curve

Many early adopters of digitalisation will have, by now, appointed a Chief Digital Officer (CDO) to lead the digital agenda and related evolutionary initiatives. The clear majority of these early adopters are consumer-facing organisations in B2C environments. Even in these early adopters it is important to note that the remit of a CDO is typically organised around digital channels rather than, as Business Technology suggests, co-ordinated change across all business areas and technology types.

In these early adopter environments, CDOs are typically from a marketing rather than engineering background. This is because upgrading and transforming customer interfacing technology is so close to the customer that it requires a significant amount of attention to customer experience and a deep understanding of what the customer wants. Additionally, organisations have often grown tired of their IT department who are seen as being restrictive and slow and therefore the decision is taken to place the disruption required outside of the traditional IT department.

In many cases CDO's have been allocated a seat at the executive table and the traditional IT organisation has reported to the CDO either directly or indirectly. This has created a tension between new CDO organisations who are focused on customer frontline interaction, often with large software development teams and corresponding large budgets, and CIO organisations who may only be included on a superficial basis. These digital teams are in reality not digital at all in the way they operate, which then leads to inherited legacy Information Technology challenges resulting in modest successes in digitalisation, which, in turn, has increased the lack of trust key executives have in digitalisation.

We have observed that in cases where the CDOs have been given the mandate and resources to operate and perform within the organisation alongside a CIO partner, the solutions are more advanced, provide clear value and overall business capabilities are improved. As the CDO's organisation delivers more and more digital solutions, the key requirement for well-managed services becomes clear to the organisation. This may not have been the case when the team was developing web content or mobile applications, but once integrated business processes and thousands of devices are brought into the equation, it becomes clear that professional service management is critical for the organisation.

The management team then comes to the realisation that one-off digital initiatives and run-time operations are not that different after all, and that both are needed equally for the company to function. Instead of operating digitalisation and internal IT in their respective silos, why wouldn't we define cooperative roles, responsibilities and interoperability between the CDO's and CIO's functions? This enables a solution where the CDO can focus on building the digital frontline and the CIO can build professional services and establish functional operations for all internal and external solutions. If we take these elements and layer them with the required business direction and the development of business capabilities, as an outcome we get Business Technology.

BUSINESS TECHNOLOGY DRIVERS

Today's organisations commonly encounter challenges related to the division between both IT and business as well as between the CDO and CIO functions. These challenges serve as drivers for finding a more comprehensive management model.

For example, the explosion of technology under-use in most businesses brings with it a risk of under-effective utilisation and potential missed business opportunity. Traditional IT teams may lack the marketing, sales and product development skills available elsewhere in the business. Traditional IT teams may also lack customer focus and may in the worst case see other business units merely as users of the systems instead of stakeholders, or even owners of the system.

Business units outside IT may not have the right skills to manage technology in a way that creates good customer experiences and avoids overspending, or select or build technical solutions that are viable and can be further developed also in the future. There is also a need for better cost management, including: a reduction in duplication of effort implementing, using, and managing technology; a need for improved efficiencies in allocating resources; and a need for better implementation and usage of technology, often as-a-Service.

The Business Technology model helps to solve these problems by introducing a cross-organisational approach.

The reasons to adopt the Business Technology Model are:

- Effective application and understanding of Business Technology helps to avoid overlapping CDO and CIO competencies and functions.
- It highlights the common goals and synergies shared by the CDO and CIO functions, enabling both to focus on their core competencies.
- It provides a clear, consistent and concise business steering approach for both the CDO and CIO and their functions.

The Business Technology Model results in improved business agility (i.e. enabling the organisation to respond to market changes quicker, reduce time to market and reduce product development cycles), enhanced security posture across the business and greater ability to comply with regulations, structured approaches for business innovation, improved ability to enter new adjacent markets, and enhanced talent retention and recruitment, by making the business more attractive to work for. Ultimately the results are reflected in product or service differentiation against competitors.

HOW BUSINESS TECHNOLOGY DELIVERS BUSINESS BENEFITS:

- It provides a clear, consistent and concise business steering approach for technology within the organisation.
- Digitalisation offers opportunities to redefine business models and modes of service or product delivery.
- Gather and formulate new streams of information by combining common data with a variety of different data sources.
- People with a clear mandate for digital agenda can focus more on business and less on IT. Business Technology is ultimately for the benefit of the customer, ensuring that their needs and expectations are met by the organisation through the effective combination and use of these technologies.

BUSINESS TECHNOLOGY – WILL IT WORK FOR US?

Most of the organisations that we have worked with or spoken to agree that the Business Technology Model is the next logical step in the evolution of digital business. Naturally there are those who are more cautious, or even concerned that Business Technology has no relevance to their organisation.

We usually find that these concerns fall into several categories:

We are too small. Companies with a small IT organisation and who may not have a CDO often assume that a concept like Business Technology doesn't match their needs or is oversized for their company. All things considered, this is a valid argument, since Business Technology requires a certain magnitude to be efficient in providing direction and enabling effective utilisation. With smaller entities, we tend to focus on improving ways of working and thinking, and recommend improved thought leadership, often in the form of business minded digital support to drive the fostering and development of IT and digitalisation.

Conversely with larger organisations it is important to guard against over-simplification, as the complex nature of the larger organisation's ecosystems have a multitude of elements requiring effective leadership and steering.

Our rule of thumb: if your company has a business-minded CIO, Business Technology is the natural next step for you. However, if your company's IT function has yet to transition away from internal support function it may be a good idea to use a CDO to strengthen your Digital business capabilities and help steer IT, before embarking on your Business Technology journey.

We are too immature. Businesses that lack trust in their IT organisation and its capability often see the Business Technology Model as a long-term strategic goal, instead of being relevant for here and now.

Mistrust in your IT organisation's ability to execute effective and innovative external services is natural if they are totally focussed on providing effective internal services. The same is true of other areas in your business, marketing and product development teams may be consumed with the day to day, and find it difficult to effectively look ahead to future business opportunities.

Rather than investing in each function separately, hoping that one will reach a level of maturity that will lead the others, investment should be focused on building multi-discipline teams. Connecting the dots between skills already present in your business will bring immediate benefit. The Business Technology approach develops and fosters existing competencies, utilising best practice examples, methods, tools and external training.

Finally, doubting your own organisations maturity should be a good enough reason for you to recognise the investment needed in sourcing and acquiring the right leadership to fulfil your vision of driving the digital agenda at the highest level.

Digitalisation is not a high priority. It is true that some businesses are further away from the relentless drive to digitalisation. However, businesses that choose to ignore digitalisation as a transformative vehicle and focus purely on IT as an operational driver, face a grave risk of underestimating the scope and importance of digitalisation in their sector or marketplace.

There are some high-profile examples of failure, but it would be simplistic to say that they were short-sighted and missed the opportunity. The reality is more subtle – they did not systematically look for it and embrace it.

- Blockbuster – who passed on the opportunity to acquire Netflix in 2000, assuming a loss making online streaming service would not challenge their existing business
- Kodak – Who invented the digital camera (1975) and then over time failed to realise digital photography was a new business rather than gateway to its film based business
- Polaroid – Who equally held onto the idea that physical prints would remain ubiquitous

It is the inability to react and to embrace new business models, created from new technology, that causes the missed opportunity. Even if your product has no digital elements, your processes and your customer intimacy and understanding will fall behind your competitors, should you choose not to invest in systematically monitoring and reacting to digitalisation. ■

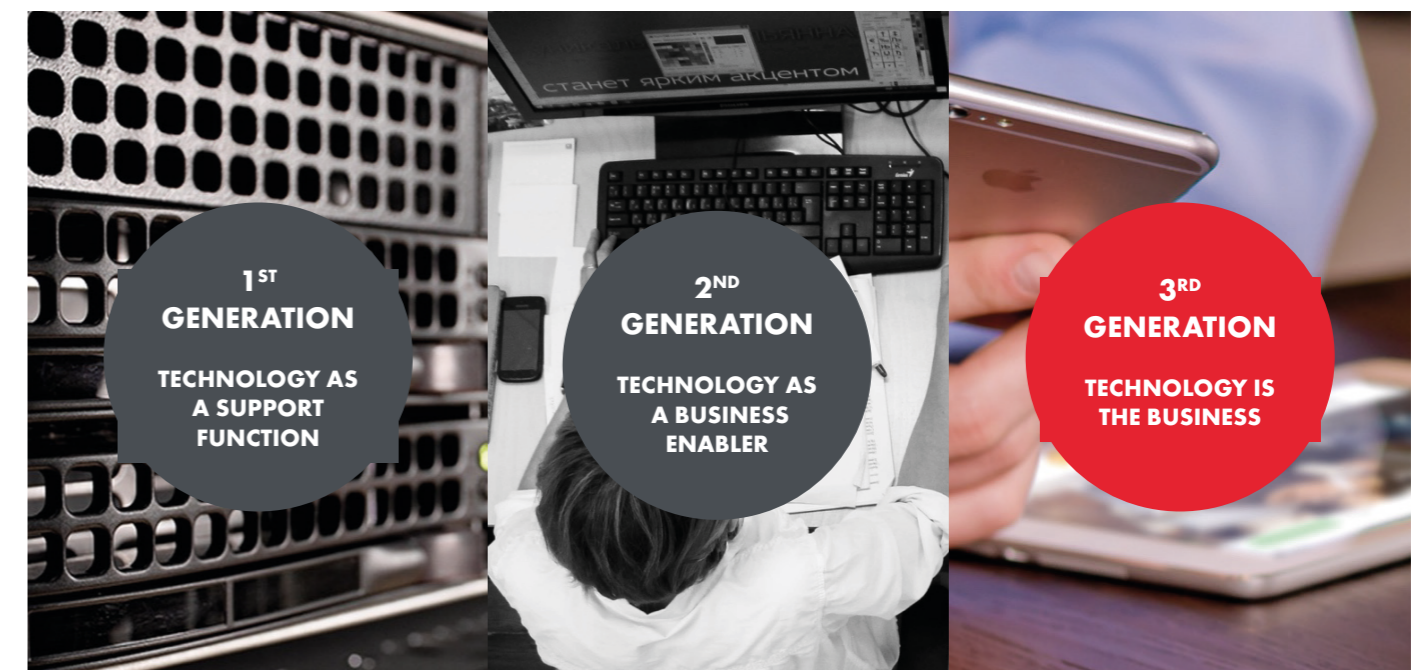


THE FUTURE OF BUSINESS IS TECHNOLOGY

BUSINESS TECHNOLOGY PRESENTS a new alternative to existing technology management models. It emphasises the need for a cohesive and business-led response to the dynamic and fast advancing technology landscape. As technology increases in importance to businesses, the pressure to control, manage, and successfully utilise these technologies will be felt ever more intensely. Business Technology will ensure that businesses are able to derive real value from technology, and ultimately, to better serve their customers.

EXPLOITING INFORMATION TECHNOLOGY IS THE JOB OF EVERY PART OF THE BUSINESS, NOT ONLY IT

The Business Technology Model emphasises the importance of digital business, but more importantly, it focusses on building a critical mass across any silos, building complementary and interdependent capabilities that drive your customer understanding and therefore business success. ■



HOW TO ORGANISE BUSINESS TECHNOLOGY

BUSINESS TECHNOLOGY IS a multidimensional operating model that requires cooperation between numerous owners and stakeholders. There are several ways to organise Business Technology with subtle variations and careful planning required to ensure best fit to your organisation. In general terms however there are two widely accepted ways to prepare your organisation appropriately for Business Technology: Separate functions with common governance; or integrated Business Technology capabilities and functions.

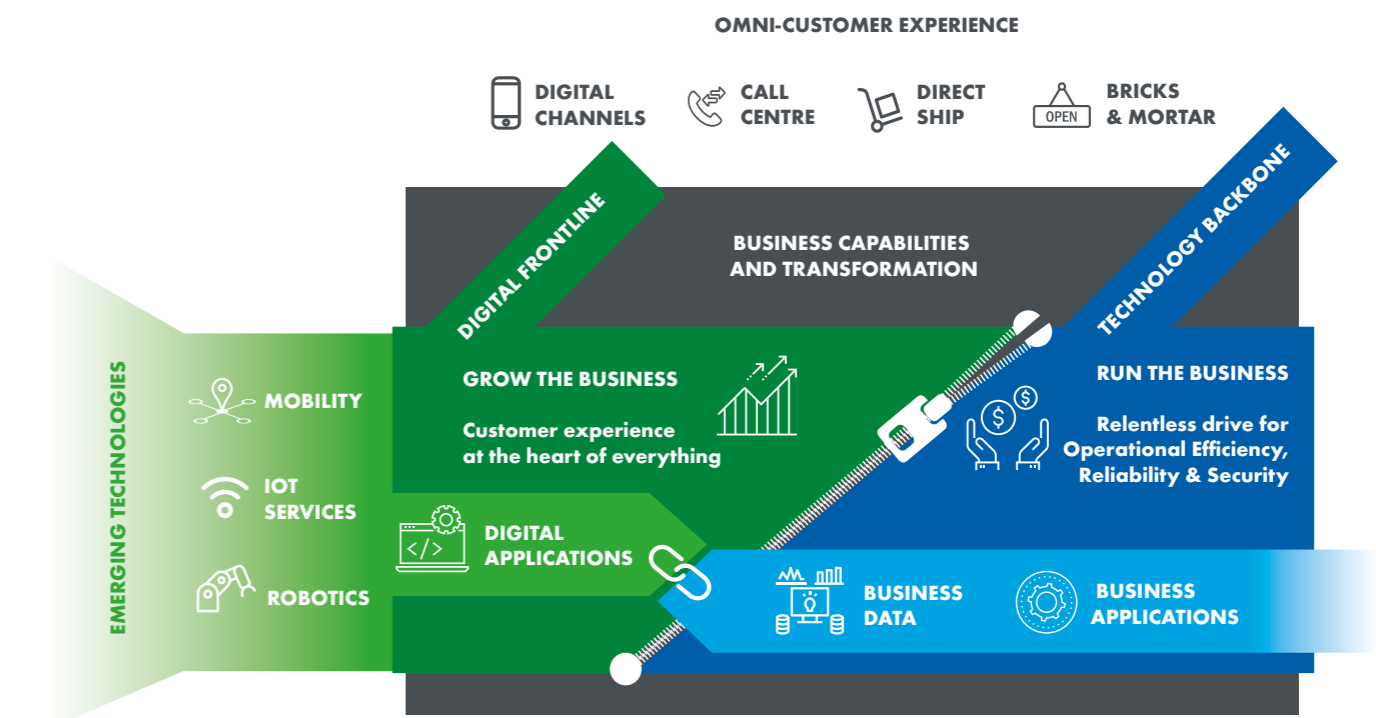


Figure 6 – Organising Business Technology

SEPARATE FUNCTIONS WITH COMMON GOVERNANCE

Business Technology can be implemented with minimal changes by aligning the existing CIO, CDO and CTO functions, and establishing a common Business Technology governance body.

Organisations often have difficulties leveraging the full benefits that can be derived from effective governance. Successfully implementing an effective governance body will drive improved coordination between functions, and increased levels of communication and cooperation. These improved relationships yield a more forward-looking organisation with cross-functional strategy, roadmaps and implementation for the entire enterprise, rather than on a functional basis.

To ensure the success of the Business Technology Model, it is critical that the governance body is chaired by one of the technology executives and includes key business stakeholders as governance body members.

The first decision in introducing successful governance to the model is whether the governing body will operate as a decision-making authority, or whether it will act as an advisory board. Furthermore, it is critical that the body has visibility of all three components of the Business Technology Model, giving the governing body the opportunity to identify related dependencies and the scope to organise cross-functional task forces when required.

The effectiveness of the governing body will depend on the suitability of its agenda, the facilitation within the governing body and the engagement from business stakeholders. It is often recommended that external facilitation and guidance is sought to provide an objective voice and viewpoint within the governing body. The key topics that all governance bodies should address and provide guidance or decision-making on are strategies, portfolios and roadmaps.

Business Technology Strategies define how to generate or facilitate business through the application of technology. Scanning the external environment to identify technology trends and their impact on business capabilities, are critical to effective Business Technology strategy governance – This defines the direction of the organisation's technology and feeds the overall business strategy.

Business Technology Portfolios describe the discipline of analysing, prioritising and coordinating technology-related development initiatives. Active portfolio governance is critical across businesses where organisations are coming under increasing pressure to rapidly react to market changes and move resources in a dynamic model that allows for an immediate reprioritisation and shift of focus. The governance body should not be designed to deal with micro portfolios. It should focus on the governance and the direction of major programmes and themes that require steering at the highest level, in order to improve their coordination across functions, business areas and geographies.

Business Technology Roadmaps define a series of formulated actions, forecasts and steps required to implement a strategy. Roadmaps should be living and breathing documents. They should be reviewed and updated regularly to provide a longer and more structured view of the technology initiatives that will drive the execution of strategies rather than portfolios. Effective road-mapping will outline a rolling view of events and milestones typically extending over the next 18 to 36 months, along with key dependencies. Some roadmaps will extend beyond this timeframe and are often based on technology dependencies such as 'out-of-support', 'end-of-life' or based on contractual obligations.

The ideal candidate for the leader of the Business Technology governing body will be an individual with the affinity for all the areas of the Business Technology Model and the ability to lead all three topics above as a broad specialist.

INTEGRATED BUSINESS TECHNOLOGY CAPABILITIES AND FUNCTIONS

While clearly a much larger initiative, integrating CDO, CIO and CTO functions into a singular Business Technology function provides an opportunity to implement advanced and seamlessly integrated capabilities. In addition to governance, there are three other core Business Technology capabilities necessary for effectively leveraging the model: business transformation and development; development integration and management; and service integration and management.

Business Transformation and Development is contributed to by all technology management functions and therefore it should operate as a joint capability. Transformation prompts a need for new competencies and roles, replacing several traditional ones. These new roles require a change in pace and mindset as well as an ever-changing skillset. Business processes in the new world are constantly evolving and the motivation to focus on relentless improvement is imperative to success in the new world. Enhancing capabilities, re-engineering processes, analysing the business for opportunities and the chance to improve ecosystem integration, as well as demanding more from both new and existing information systems, are things that we can look forward to in the future.

Development Integration and Management, also known as DIAM, manages development portfolios and roadmaps at an operational level on behalf of the Business Technology governance body. Whilst the development itself is carried out in specific competency centres within the business, DIAM coordinates dependencies, controls business case realisations and manages the development ecosystem. High priority development initiatives are likely to require extensive business commitment and cross-functional contribution, calling for strong relationships across functions. It also requires strong partnerships with selected new and existing solution providers to manage risks, resources and dependencies. Partnerships are typically facilitated by DIAM in high-performing organisations.

Service Integration and Management, or SIAM, manages service portfolios and roadmaps at an operational level on behalf of the Business Technology governance body. The delivery of the service is provided by service centres and vendors, but the SIAM function assures and governs the quality of the service. Modern solutions are now increasingly cloud-based and thus unlikely to be delivered by a preferred infrastructure service provider, yet the services still need to be secured and seamlessly integrated. While the Business Technology governance body makes decisions on a strategic level, SIAM must execute on a tactical and operational level, optimising the effectiveness of service owners and managers committed to developing services and meeting business needs.



FINAL WORD

I HOPE THAT you have found this white paper to be informative and above all useful! The rate of change within business, fuelled by technology, will continue to gather phenomenal pace. We will see a further shift towards a service economy, with services ever more tailored and personalised for the customer.

Adopting the Business Technology Model is essential for getting the most out of existing capabilities, maturing future capabilities and providing ever stronger customer focus. Co-operation and cross-functional teamwork are becoming increasingly important, building

on the strength of your existing business capabilities, through the integration of disruptive technologies, such as automation, robotics and Artificial Intelligence.

We believe this brings tremendous opportunity and I hope you are as enthused by this opportunity as we are. I look forward to further community discussions, which I very much hope you and your business can be a part of. ■

**Regards
Juha and most of all,
the community of contributors.**

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THE BUSINESS TECHNOLOGY COMPANY.