

THE IMPORTANCE OF MODERN APPLICATIONS



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braintree

A  Company

TABLE OF CONTENTS

1. Market overview	3
2. How consumer behaviour is impacting on business application design	5
3. Understanding the difference between traditional and modern applications.....	7
4. Modern platforms and the impact of cloud computing on application development.....	9
5. Importance of modern technologies	11
6. Understanding the Braintree value proposition.....	12
6. BC Xpress	12
6. CRM24	13
7. Conclusion	14

MARKET OVERVIEW

Modern applications are flexible, scalable, user-friendly, predominantly Cloud-based, and geared for agility which more traditional solutions cannot provide.

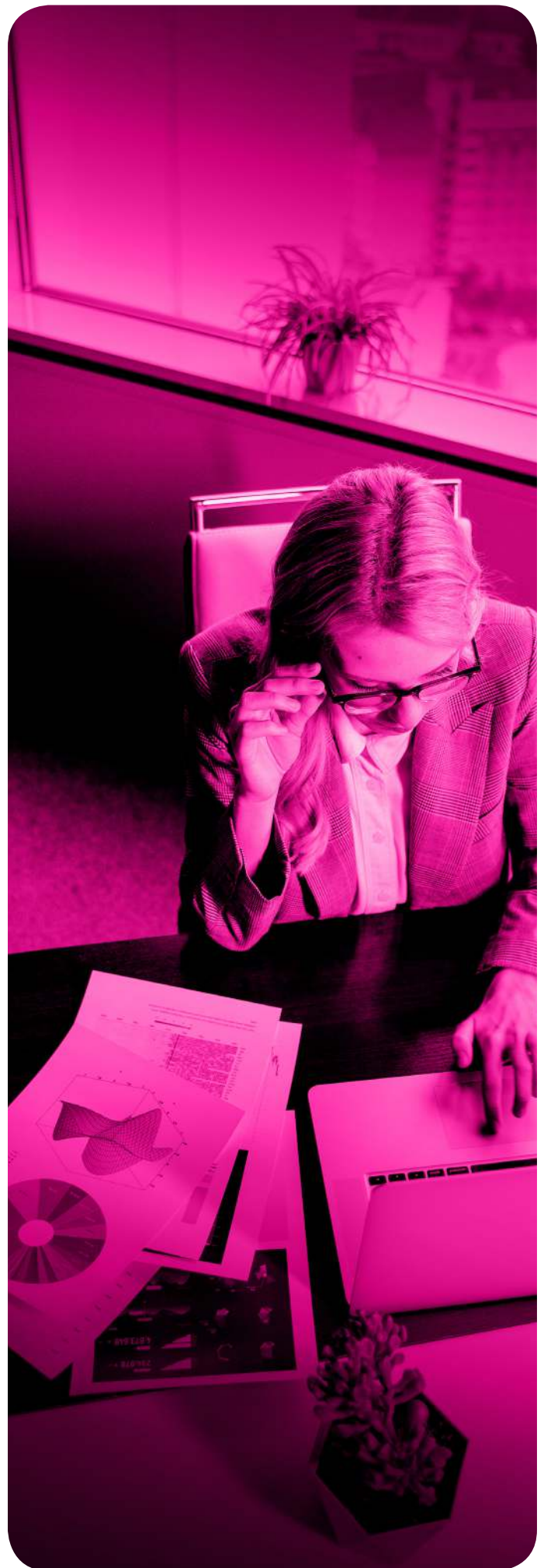
In this environment, modern applications represent freedom of movement that companies and employees rarely experienced with legacy systems. These solutions can operate in the Cloud and not be tethered to hardware like servers, desktop computers, notebooks, and smartphones. It is this flexibility that provides business leaders with an opportunity to reinvent their organisations in ways more reflective of the needs of today's connected consumers and employees.

But perhaps more importantly, the modern application is not limited to the capabilities of on-premise infrastructure. This empowers companies of all sizes to harness the high-performance computing capabilities available in the cloud to embrace innovative technologies such as artificial intelligence (AI), machine learning, robotic process automation (RPA), real-time data analytics, and so on.

This brings scalability that extends beyond the number of users of an application but delivers increased financial flexibility.

Pay-per-use has become a way of life for businesses in the modern application environment. This lets a company more efficiently manage its budget when it comes to IT spend. So, instead of worrying about complex software licensing fees that remain in place for at least a year even if employees leave the organisation, the business can focus more on achieving its strategic objectives.

In addition to all the other changes the COVID-19 pandemic has enforced on companies and people, the fundamental principle is that those who are resistant to change will be the ones that become irrelevant in a digitally transformed world. Even though this does not mean ripping and replacing existing IT infrastructure, there must be a willingness to change and embrace modern applications to



enable a digital environment that is cloud-driven thereby unlocking all the associated business advantages attached to it.

In fact, modern applications reflect four key characteristics and functionalities:

- **Scalability:** Today we need applications that can scale to thousands of users on-demand across the world.
- **Portability:** Modern applications need to be designed to run across multiple cloud and on-premises environments, with the flexibility for businesses to choose cloud providers, draw from a wider skills base for managing their applications and increase platform reliability.
- **Resilience:** Modern applications set the bar for resiliency higher than for traditional applications. In a world that is increasingly reliant on networks for medical connectivity, disaster management, financial transactions, and weather predictions, there is an imminent need for more resilient applications that customers can depend on.
- **Agility:** Agility in the modern software world is no longer a nice to have. Agility is now the need of the day for companies to survive and thrive. Our software needs to imbibe this in process as well as product.

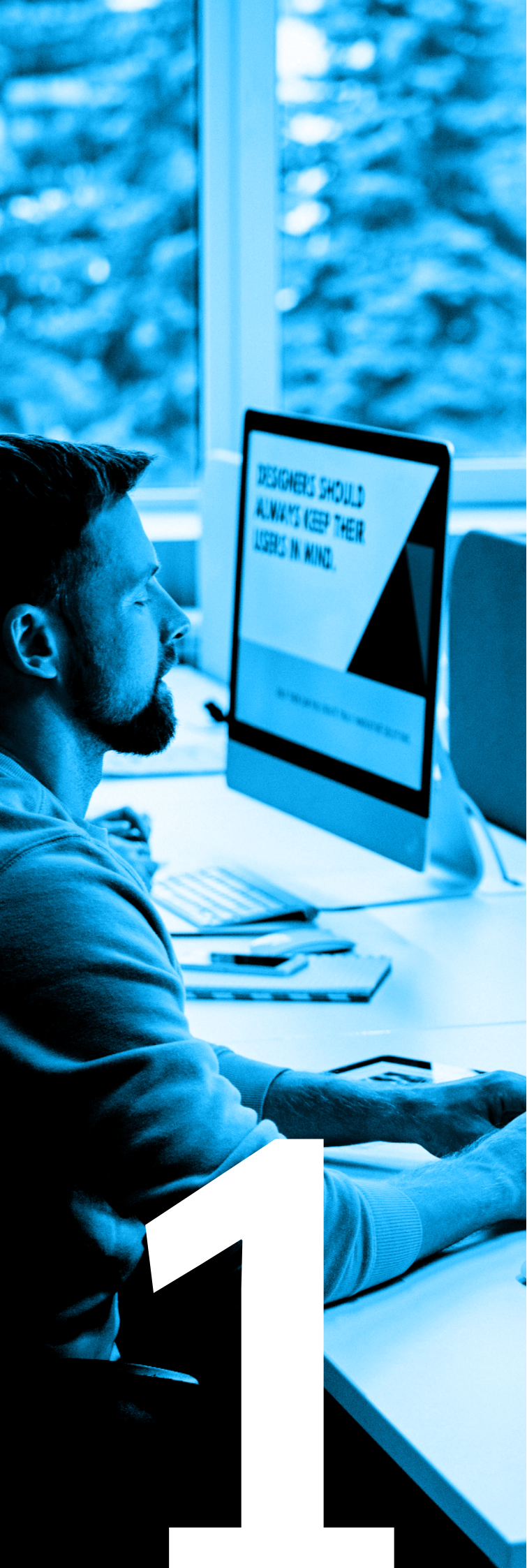
The reality is that the older systems and applications are, the more likely they need to be

replaced as requirements change or new features are required. As systems age, it is also likely they become more expensive and difficult to support and maintain. Application modernisation, therefore, creates business value by enabling an organisation to increase revenue and reduce risks.

Modern applications capable of delivering insights while providing a company with the agility to innovate in a rapidly changing landscape, therefore, becomes essential. With most employees expecting to work remotely at least a few days a week even when lockdown restrictions ease, companies need to think about how best to inject this agility and flexibility into operational processes.

The trigger that makes this accessible is a cloud-based environment that strengthens applications in more relevant ways. Those decision-makers who were sitting on the fence in terms of cloud adoption have begun implementing measures to make the transition. Not only does this help with employee productivity, but it also greatly enhances the customer experience. These end-users have come to expect a level of self-service in their dealings with service providers and want more information available to them to make informed buying decisions. The cloud enables this by making traditional on-premise data and systems accessible to remote workers giving them the ability to deal with customers far more effectively.





HOW CONSUMER BEHAVIOUR IS IMPACTING ON BUSINESS APPLICATION DESIGN

Consumer behaviour is anchored to a specific moment in time. This means that what is happening in the world has a direct impact on how people engage with one another, their service providers, and the technology available to them.

And while this has always been the case, it has become especially evident in the shift in human behaviour resulting from the COVID-19 pandemic and lockdown restrictions. The rapid adoption of digital transformation strategies by organisations across industry sectors to remain operational at a time when remote working has been normalised has contributed significantly to reinforcing changing customer expectations.

Deloitte examined how consumption behaviour has changed as a result of this and how it is expected to evolve in a post-COVID world:

- **Online vs. Offline:** Due to the lockdown and increased health-consciousness, consumers were forced to buy more goods online and to use more digital services. However, will this forced trend continue after the crisis – and for which categories will this hold especially true?
- **Sharing vs. Owning:** Before the crisis, the sharing economy was at an all-time high. What will happen after the crisis – will consumers be more timid in sharing spaces and goods or will convenience lead them back?
- **In-Home vs. Out-of-Home:** Dining out and convenience formats were on the rise before the crisis. The lockdown has forced people to not only dine in but also change their fitness behaviour. Will the crisis change the fitness and gastronomic sector forever or are consumers longing to get back to their old habits?
- **Local vs. global:** Globalisation has been the driver of the economy over the past decades – for the first time ever global exchange, travel and supply chains have been disrupted severely, fostering already

ongoing localisation trends – especially in the food and retail sector. How will the new normal look like? Are consumers willing to give up convenience and pay a premium to support local economies in the mid-term as well?

- **Data privacy vs convenience:** Consumers have always put a lot of emphasis on data privacy and not sharing (too much) personal data. However, the crisis and the increased dependencies on digital services has forced many consumers to give up their data more often than before. Did this foster a long-lasting mindset change or not?

Over the past 16 months, people have been conditioned to act in certain ways. Thanks to their increased connectedness and reliance on technology to do everything from work, shop, bank, be entertained, receive education, and so on, they have come to expect instant gratification in all aspects of their lives. For instance, a person hears a song they like on the radio and can simply buy the track online and download it to their mobile device.

Today's consumer, therefore, expects things in a certain way. It has come down to accessing everything on-demand with technology becoming the enabler to do that. The mindset is one where if there is a need for something, a person can just click on a button to get it.

Swiss Re Institute has identified five trends in the behavioural challenges emerging from the impact of the pandemic:

- **Increased digital adoption:** People shifting to digital platforms for day-to-day needs.
- **Change in mobility patterns:** Less use of

public transport, more remote working etc.

- **Change in purchasing behaviour:** Move to value-based purchasing and online shopping.
- **Increased awareness of health:** Wearing masks, increased hygiene, healthy eating etc.
- **Changes in interpersonal behaviour:** Increased divorce, increased pet adoption etc.

It is this conditioning that is driving the same behaviour when people operate in a business environment. After all, it does not matter at what level a person is in the business, they are all consumers of technology and have been influenced by this acceptance of instant gratification.

This means that employees have the same mindset when it comes to their business applications. People have learned new habits and expect companies to follow suit in how operational systems and the associated processes function. So, the blurring of work, leisure, and education mean employees demand a broadening of business boundaries in ways that were never considered before. This requires as much a change in mindset from business leaders as it does at a developmental level from the applications themselves. The way business applications used to work will no longer be relevant in this dynamic, new environment.

From a consumer perspective, companies must meet these expectations to ensure engagement. And from an employee perspective, they must follow suit to drive efficiencies, have more productive workers, and be able to leverage sophisticated technologies made available through cloud environments.





UNDERSTANDING THE DIFFERENCE BETWEEN TRADITIONAL AND MODERN APPLICATIONS

Traditional business applications are limited to the core functionality they are designed to perform. For instance, a company would have a dedicated financial application with a specific menu structure in place to fulfil things like debtor and creditor management, accounting, supplier orders, and so on. The applications are essentially structured in a way that best suits those components. For users, this means learning how to navigate within the limitations of a particular application.

An example of this is if a customer emails an account manager wanting to increase the number of units in a sales order. A traditional application environment means the employee must jump from the email programme, log in to the finance application, call up the ordering system, and then change the order. They would then need to go back to their email, attach the

updated order, and send it to the customer. Not only does moving in and out of applications limit productivity, but it is also prone to human error.

Modern applications reinvent this process and remove the boundaries that currently exist between solutions. In the above example, this would mean simply clicking on the order number used in the email and have the finance programme automatically load it up for the account manager to update. The new order will then be sent to the client without any other employee involvement required. This highlights how important information on demand has become and reinforces how instant gratification from a consumer perspective can translate into operational benefits when applying to business applications.

The illustration below highlights the fundamental differences between traditional and modern (or cloud-native) business applications.

Traditional Applications	Cloud-Native
OS Dependent	Os Independent
Waterfall development	Continuous delivery
Manual scalability	Automated scalability
Oversized capacity	Capacity utilisation
Non-immutable and hard to Predict	Predictable and Immutabile
Unpredictable	Predictable

Source: XenonStack

Cloud applications also deliver significant business benefits when compared with legacy environments:

- **Agile** – Users can update and deploy cloud applications quickly, allowing enterprise leaders to respond to problems without needing to take entire servers offline.
- **Serverless** – The serverless nature of cloud applications makes them more scalable according to demand unlike the static infrastructures of traditional applications.
- **Scalable** – The scale of cloud providers' data centres as well as the competitive provider market are driving down costs for building and maintaining cloud applications and spurring the move away from dedicated servers for each tier.
- **Environment agnostic** – The environment-agnostic nature of cloud applications means that no tool or library can exist outside of what IT experts explicitly declare, simplifying setup for developers.
- **Secure** – Multiple networks host cloud-based application components, making them harder to attack, and the massive scale of many providers brings large-enterprise security measures to smaller operations.
- **High availability** – Cloud application architecture has infrastructure in place to always keep the applications of the business operational.

Modern business applications, although predominantly based on cloud environments, should not be confused with virtualisation. Virtualisation is a software that divides up physical IT infrastructures to create virtual environments of dedicated resources. It helps to improve business performance and reduce IT costs by making it possible to run multiple applications and operating systems on the same server, simultaneously. In essence, this is the technology that underpins the cloud.



3

MODERN PLATFORMS AND THE IMPACT OF CLOUD COMPUTING ON APPLICATION DEVELOPMENT

Over the course of the last year, businesses have had to capture data they never needed to before. Whether it is daily temperature readings or responses to health questions as examples, companies across industry sectors have had to strengthen their ability to manage and analyse data. But herein lies significant opportunities to reposition themselves and deliver more relevant solutions reflective of today's customer requirements.

It stands to reason that modern applications need modern platforms to harness the potential of cloud computing. This is where organisations like Microsoft become key to enabling the development of a more advanced business environment driven by sophisticated applications. By linking three platforms (productivity, business, and the Azure cloud), Microsoft has established an ecosystem

where service providers can create innovative applications that benefit from this singular approach and the interoperability delivered across these platforms.

Microsoft can therefore drive multi-tenanted structured data in one place given the massive cloud infrastructure they have in place. And the more users of that environment, the more data they can gather to gain an understanding of market segmentation, profiling, and other statistical information. Of course, it does not mean they are accessing personal information but rather masked data that interprets information to present buying patterns, consumer behaviour, and other elements as required by corporate customers.

For instance, a construction company receives a request for materials from a developer. Because

the data is in a cloud environment, the system can glean information from a broad environment and use algorithms to present relevant data to the construction company in real-time such as the likelihood of the developer being able to pay on time or not.

Getting access to this information at an application level without even having to ask for it brings home the concept of instant gratification and on-demand information. The computing environment is now about more than just providing instructions. It is giving business users insights based on the high-performance computing capabilities available through the interfaces of modern applications.

The interoperability of solutions across platforms and rendering that information back to the users of the system is the driving force behind modern business applications.

As the number of data points have increased, so has the need to automate as much of this information gathering as possible to create efficiencies, reduce risk, and save money. With this automation comes the potential for innovation. It is as much about freeing up internal resources as it is about discovering hidden insights in the data an organisation has available.

Thanks to the adoption of modern business applications, it is now possible to do scenario planning and automate how these can potentially solve organisational challenges within a few days. Of course, it is about more than providing a business application that delivers singular value. It introduces different layers to create a more intelligent environment that can effectively analyse the data at hand.

Ultimately, cloud-native applications are designed to opportunistically exploit all available cloud services to maximise performance, scalability, reliability, security, adaptability, and manageability at the lowest possible cost.

This brings with it the efficient use of resources when it comes to the development of modern business applications. Those solutions that rely on the cloud and virtualised services are generally more efficient and better equipped to meet user demands. The pay-per-use model of cloud computing services provides companies with flexibility in how much they want to spend and therefore eliminates unnecessary expenses. Also, cloud computing services allow the business to deliver an application on multiple devices regardless of the operating system.



IMPORTANCE OF MODERN TECHNOLOGIES



Perhaps one of the best examples of modern technologies to drive business value can be seen through AI. In fact, the use of AI is growing across industry sectors. But before cloud computing, companies had to invest significantly in the hardware to drive the complexity of AI from an on-premise environment.

Half of the respondents in a recent global survey have indicated that their companies have adopted AI in at least one business function. And while these functions remain largely unchanged from 2019, with service operations, product or service development, and marketing and sales again taking top spots, this highlights how important customer-centricity is in the business value chain.

According to this McKinsey survey, the largest share of respondents has reported revenue increases for pricing and promotion, customer-service analytics, and sales and demand forecasting. More than two-thirds who report adopting each of these use cases say it has resulted in increased revenue.

Companies are turning to AI to cut costs, reduce risk, and generate more advanced customer insights. The initial focus during the hard lockdown was on business survival. This has given way to the realisation that the operating environment after COVID-19 will be significantly different to the one at the start of 2020.

To this end, those businesses who have gained a better understanding of their organisational

needs during this time will be able to develop an AI strategy and make targeted AI investments to deliver a high return on investment without putting significant strain on already tight budgets.

Even though it is AI that has been garnering significant media interest in recent months, machine learning (ML) provides the nuts and bolts for companies to realise the automation of tasks that normally require human intelligence. For its part, ML can be defined as the use and development of computer systems that are able to learn and adapt without being explicitly programmed. These systems use algorithms and statistical models to analyse and draw inferences from patterns in data.

Of course, none of this can happen without having data science in place. This interdisciplinary field uses scientific methods, processes, and algorithms to extract insights from structured and unstructured data. In turn, this knowledge is applied to solve business problems. ML can only provide quality insights if it receives quality data. Therefore, without a foundation built on clean, consistent, and quality data, little (if any) meaningful insights can be made.

With cloud-based environments such as Microsoft Azure becoming available to companies of all sizes, more businesses have access to these specialist skillsets and capacities than before.

5

UNDERSTANDING THE BRAINTREE VALUE PROPOSITION

BC XPRESS

Targeting small and medium businesses requiring a cost-effective and customised Microsoft Dynamics 365 Business Central environment, Braintree BC Xpress is a pre-configured, cloud-based accounting system available through a monthly subscription that includes additional support and business intelligence functionality.

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BC Xpress uses a rapid-deployment approach while still achieving the Braintree focus on customer-centricity. Given the shift to modern business applications, this is something that lacks in other template-focused solutions available in the market.

Given the challenging economic environment, many small businesses cannot invest upfront for new deployments. To this end, BC Xpress is available on an affordable monthly subscription basis with only R10,000 needed for installation fees. This makes the power and innovation of an enterprise-level solution like Microsoft Dynamics 365 Business Central accessible to more organisations across industry sectors.

While the issue of cost is addressed through this subscription model, many smaller companies are also concerned about incident support. Typically, there would be a Service Level Agreement (SLA) in place where a company will invest in

a certain number of support hours per month, regardless of whether they use it or not.

This sees 12 support incidents included in the monthly subscription price which companies can use as they see fit over the 24-month contract period. So, whether it takes five minutes, five hours, or five days to resolve an issue, we work on an incident until it is fixed. There is also the option of purchasing additional support should that be required.

The third significant differentiator of BC Xpress is that it incorporates business intelligence capabilities. This means that the customer will also receive a Microsoft Power BI licence and a free two-day training course with Braintree for one candidate as part of the solution.

Cloud-based accounting systems are an essential part of the modern business. But if a customer needs to restore data, then it invariably entails a complex process with the service provider. BC Xpress includes 250GB of independent backup meaning the customer is in full control of the restoration process. It comes down to giving our customers everything they are looking for from both technology, business continuity, cost, and accessibility.

Braintree will also optimise BC Xpress for the customer environment after an initial six month period. New deployments often start with the basics with companies not realising the full potential of the system they now have in place. Once the initial 'new car' feel of the solution wears off, Braintree comes in to assist and tailor the offering even further as part of the monthly subscription fee.

5



Customer relationship management (CRM) has become one of the most important strategic areas in business today. The pandemic, challenging economic conditions, and an increased focus on digital solutions mean organisations are rethinking their approach to these systems.

Being able to transition to a cloud environment has been a critical enabler in this regard. With customer retention becoming an all-encompassing business priority following a turbulent year, CRM solutions that deliver agility and customisability in an affordable package will be vitally important.

This has given rise to a spate of CRM solutions that use existing enterprise-level technology that has been repurposed in a rapid deployment methodology. Typically associated with a template-based approach, these are designed to be rolled out quickly and 'plug in' to existing processes with the least amount of disruption. However, product differentiation is virtually non-existent with little to choose from between what is available.

As such, the CRM24 cloud-based solution injects the traditional rapid deployment approach with a focus on customer experience to ensure the solution is built around the needs of the client and not the other way around.

The template is just a component of what CRM24 delivers. Affordability is a key focus and, as such, the solution is available on a 24-month subscription basis. This means that instead of making a significant upfront financial investment, customers can more affordably implement a high-level solution that unlocks the high-performance computing capabilities of the cloud.

As part of the monthly subscription, 12 support incidents are included which can be used over the 24-month period as the customer sees fit. Whether the problem resolution takes five minutes or five days, it will still count as one support incident further differentiating it from competitor solutions.

Although CRM24 is cloud-based, it features an independent 250GB off-site backup as a further value-add. This gives the customer complete control and flexibility over their business continuity and how quickly they can restore data without going the cloud route.

Companies limit the amount of new functionality they explore in their cloud-based solutions. To this end, after six months, Braintree will optimise the CRM24 environment for free to ensure customers get the most value out of the system. This helps deliver a richer customer experience.

CONCLUSION



The beauty behind the Braintree approach to modern business application development is that the solutions sit on a Microsoft platform as the foundation. This provides users with a more integrated environment that delivers full value from the solutions without having to jump between applications and reduce productivity.

It comes down to leveraging the high-performance computing capabilities and advanced intelligence of the Microsoft environment delivering greater efficiencies to companies. This means businesses can set up workflows to optimise how data is moved between platforms without needing to copy and paste information. This allows for centralised business rules, centralised data, and centralised workflows.

With solutions like BC Xpress and CRM24, they follow a templatised deployment model despite their advanced features. This allows for fast rollout times and encourages speed of innovation within the organisation. And because the deployment costs are amortised over the 24-month subscription period, even smaller companies can access sophisticated AI-driven solutions so integral to modern business applications.

The world has irrevocably changed into one that requires scalability and flexibility as workforces expand and contract. Having modern business applications as a foundation becomes a central driving force to make meaningful change and harness innovation across all levels of the organisation.



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