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CLOUD

A Cloud Platform for Digital Business

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Executive Summary

A digital business is an enterprise that embraces technological advances in a way that empowers customers, optimizes business operations, fuels innovation, capitalizes on new business models, and increases profits. To a certain extent, every company must become a digital business as organizations in both the public and private sectors respond to digital disruption. There is increasing pressure to act more quickly and reduce time to market for products and services. Digital innovation is rising—along with customer expectations.

Many organizations want to embark on the digital journey but they are held back by legacy information systems and infrastructure. Aging information systems often inhibit responsiveness and degrade service levels. A lack of speed or agility results in inconsistent, impersonal, and disconnected experiences for customers, partners, citizens, and employees.

Becoming a digital leader is about overcoming digital business challenges using new technologies in cloud, mobile, social, the Internet of Things (IoT), and big data. But these technologies by themselves are not enough. A successful digital business learns to infuse these technologies into a relevant business context. Internally, the front-end applications that govern the digital experience must be seamlessly connected to the back-end enterprise applications and systems of record. Externally, people and systems need to interact with supply chain partners, contract manufacturers, and other third-party constituents. Within the context of business processes and information systems, much of that flexibility comes from nimble software technology known as middleware.

This paper explains how middleware can become the foundation of a digital cloud platform that allows you to create or enhance applications, business processes, and entire line-of-business offerings—without major retooling and while leveraging your existing assets and investments.

Motivating Factors for Becoming a Digital Business

A digital business strategy creates value and revenue from digital assets. It goes beyond process automation to transform processes, business models, and the customer experience by exploiting the pervasive digital connections among systems, people, places, and things. Companies with flexible and adaptive business processes are best positioned to make the transition to a digital business.

To respond effectively to today's new business dynamics, you not only need a strategy, but also an understanding of what makes a digital business work. New attitudes, perspectives, and cultural and technical changes are important. And in order to seize opportunities, you need the right technology platform. If your information systems and business processes are too rigid, you won't be able to utilize

new technologies and leverage new market opportunities. Many organizations are burdened with legacy systems that stand in the way of these goals. The business is based on these systems and the information they contain. They embody the intellectual capital and unique processes that keep the organization running and distinguish it from competing organizations.

The key is to have a flexible middleware core that lets you leverage new and old information as opportunities arise and business processes evolve. Standardizing on a comprehensive and flexible cloud platform helps carry you into the future. Oracle Fusion Middleware is a digital business platform that enables organizations to create and run agile, intelligent business applications while maximizing IT efficiency through full utilization of modern hardware and software architectures. For established and aspiring digital businesses, this integrated family of products provides a foundation for innovation and a way to extend the business value of existing investments.

Once you standardize on Oracle Fusion Middleware, Oracle does the hard work of connecting cloud and on-premises information systems, enabling mobility, allowing you to leverage analytics and data opportunities, infusing social and mobile capabilities into your information systems, and taking advantage of future technologies. This middleware foundation also simplifies integrations with Oracle Applications and third-party solutions. It ensures that new and old technologies can work together seamlessly to propel your business forward.

Five Components of Digital Leadership

There are five key solution areas that enable market leaders to seize opportunities and become digital business leaders:



Digital Experience

Many companies have a difficult time delivering great customer experiences because they lack the necessary connections among information systems. For example, customer information is often stored in multiple digital silos and may include e-mail messages, interactions from social forums, data from weblogs, and much more. With so many disconnected sources, it's difficult to develop a cohesive view of your customers, prospects, and audience segments. This disparity can lead to customer experiences that are inconsistent, one-dimensional, and lacking in context or relevancy.

To market your business effectively in today's diverse industries, you need more than a unified source of customer data. You also need systems that can rapidly convert anonymous audiences into "known" customers, so that they can be further developed into involved customers or advocates. This requires gathering rich, granular customer information to inform the entire customer-engagement loop, including buy-side and service-side experiences.

Digital businesses learn to predict the needs of customers by offering dynamic, engaging interactions via each customer's preferred mode of contact. They service many channels inside and outside the firewall—web, mobile, social, and point-of-service. Broadly speaking, there are three fundamental ingredients to providing a great digital experience:

- **Make it seamless.** Delivering a customer experience that engages and enhances your brand requires consistency across multiple channels and devices.
- **Make it tailored.** A customized experience delivers the right information and context to the right audience at the right time—throughout the entire engagement cycle.
- **Make it innovative.** There is a tremendous amount of noise in the digital arena, so you must engage customers in ways that differentiate your brand, grow loyalty, and increase revenue.

Digital Experience Requires New Priorities



MAKE IT SEAMLESS

Provide consistent multichannel experiences and maximize cross-sell and up-sell opportunities



MAKE IT TAILORED

Create the right experience at the right time for each individual person



MAKE IT INNOVATIVE

Engage customers in new ways with the latest social, cloud, mobile, and media capabilities

Business Agility

Business agility entails adapting to the rapid pace of business change in a way that doesn't undermine IT and that also harnesses the power of technologies such as cloud and business process management

(BPM). Flexible business processes are a key component of becoming a digital business. They enable agility by allowing an organization to leverage both on-premises and cloud applications. Digital businesses have embraced a new kind of business process management platform—one that brings together all the elements of digital transformation such as social, cloud, mobile, fast data, and IoT in a highly responsive system. These platforms allow developers to embed actionable analytics into business processes, and permit users to interact intelligently with enterprise applications and systems of record.

To build a truly digital business, you have to create a responsive enterprise that can embrace the disruptive technologies that drive innovation. You need solutions that enable you to understand customer concerns, deliver real-time visibility into enterprise activities, remove internal roadblocks, and increase agility. Change is inevitable and nimble organizations use intelligent BPM systems to automate operations, make better decisions, exploit business opportunities, and react to changes in the marketplace. Intelligent BPM systems use dynamic case management technology to analyze business processes, detect events, and help people respond. These systems close process “gaps” with interconnected, adaptive cases and workflows, and streamline collaboration by facilitating real-time decision management.

Intelligent BPM systems facilitate collaboration by seamlessly combining on-premises and cloud-based information and infusing actionable analytics into process workflows. Innovative companies use these systems to capture insight from people as well as to trigger actions from system events.

Business Agility Requires New Priorities



SPEED TO BUILD

Wire new and change existing business processes quickly to deliver new products and services



SPEED TO DEPLOY

Quickly deploy in the cloud and transparently move workloads between the cloud and on premises



SPEED TO RESPOND

Respond to market shifts faster through actionable and predictive intelligence

Digital Connect

The real value of a digital business can be summed up in a word: *connections*. Whether you are talking about employees, customers, partners, or any other group of constituents, people need to be able to easily connect with your firm and securely access pertinent assets.

To facilitate these connections and enable unparalleled digital experiences, content and business processes need to be properly integrated, both within your company and externally with partners and stakeholders. The better your connections, the more agile your company will be. 80 percent of the

companies surveyed by Dynamic Markets said that cloud applications should be fully integrated and 53 percent admitted innovation was hindered by not being connected to other systems and other clouds.¹

When a business is not digitally connected, what is the impact?

- Inaccurate business data
- Inability to gauge business performance
- Difficulty innovating quickly

To overcome these hurdles, consider bringing all your connections and data mapping constructs together in a cloud service. Then think about doing the same thing with your business processes. Leveraging cloud services can accelerate innovation and make it easier to automate repetitive business processes.

Digital Connect Requires New Priorities



CONNECT EVERYTHING

Unify connection to devices, data, APIs, and applications



SIMPLIFY INTEGRATION

Eliminate complexity between cloud and mobile apps as the foundation for a connected business



FLEXIBILITY AND CHOICE

Allow your integrations to transition to the cloud or to be extended to any platform

Immediate Reactions

The success of a digital business depends upon the quality and quantity of information available from enterprise applications, file systems, content management systems, cloud applications, legacy applications, and many unstructured data sources. Without timely data, you can't seize market opportunities in time to benefit from them—assuming you even see those opportunities coming.

The term *immediate reactions* refers to the continuous processing of events and data in real time to gain instant awareness and take instant action. Being able to manage large quantities of “in-flight” data enables organizations to stay in front of business-critical decisions. Capturing data faster and moving it faster means being able to analyze it and act on it faster.

¹ Dynamic Markets, “Cloud for Business Managers: the Good, the Bad, and the Ugly,” 2013.

Of course, it is not just content, but also business processes that define a digital business. Astute firms learn to close data gaps by making instant, intelligent connections among people, places, and information systems—on premises, in the cloud, on mobile devices, and with input from many types of devices and things.

Immediate Reactions Require New Priorities



REAL-TIME CAPTURE

Filter, correlate, and move data and events across mixed sources (big data, cloud apps, mobile, IoT)



REAL-TIME PROCESSING

Supercharge business processes and applications to operate at “the speed of now”



REAL-TIME INSIGHTS

Leverage real-time analytics to provide rich customer insights, self-service dashboards, and immediate decisions

Digital Identity

The global economy depends on having reliable methods that people can use to validate their identities. As the digital landscape becomes more diverse, most people have to manage a growing number of login credentials to access digital services. Centralized identity management technology can dramatically simplify this fundamental part of the IT infrastructure.

Unfortunately, embracing digital business models remains challenging for many companies because their IT infrastructure was not designed to consume the credentials of digital customers. Even business-to-business transactions are not able to scale to the volume and service levels required by today’s internet value chain.

As services and goods become digitized, businesses face a new set of requirements that include integrating digital identity into core business operations. From demand-generation and customer service to fulfillment and security, the evolution of the digital economy is taking off—as are the personal benefits and collective opportunities for corporate and economic growth. This economy is predicated on the need for access by anyone, from anywhere. How do you handle authentication, trust management, access control, directory services, and governance for a roving workforce that expects a consistent experience, whether they use an Apple iPad at a coffee shop or boot up a computer in the office?

Ideally, your information systems should recognize users and support access, permissions, and password security across all devices and all locations. Mobile, desktop, and every other type of platform must be easy to access, yet secure.

How do you personalize the interactions with each individual and enable collaborative experiences? How do you maintain the customer's privacy while complying with stringent regulatory controls? You do it by embedding digital identity as a seamless part of the experience. By using best-in-class identity management technology, you can integrate single sign-on, user self-provisioning, and fraud detection to ensure a secure yet friendly user experience across cloud, mobile, and social realms.

Digital Identity Requires New Priorities



UNDERSTAND BEHAVIOR, LEVERAGE SOCIAL

Make purchasing decisions based on social trust and personal reviews



IDENTIFY USERS ACROSS CHANNELS

Create a more personalized experience across multiple channels with a consolidated identity



SECURE USER INTERACTION


Prevent fraud by detecting anomalies and reducing risk with automated security governance

Working in Unison

Intelligent business processes and contextually managed content enable engaging digital experiences. In order for these experiences to be unified, the back-end systems must be able to deliver the right information in the most relevant context to the user. They must be properly integrated to pull the latest content, be connected to the right systems of records and applications, and be interconnected by optimized business processes.

Think of these systems as a set of building blocks, in which individual blocks represent your various content sources, applications, and business processes. Each face of the larger composite block represents a different aspect of the company such as a marketing website, a customer self-service portal, a partner-oriented website, employee applications, and so forth. The goal is to deliver a seamless, multichannel experience to each group of constituents by combining information, insight, and transactions from these internal systems. When the internal systems work in unison—when the many small blocks are properly interconnected—then you are able to present a cohesive face to your constituents.

Once you break the blocks apart and look behind the faces, you can see what is powering it from within. Portals, web content management, enterprise content management, business process management, and other middleware technologies are the basic plumbing for a digital business. They provide an infrastructure for more-advanced digital assets such as transactional content management and case management. Other essential parts of a robust middleware platform include a centralized security architecture, data integration technology, business intelligence tools, and a foundation for running cloud applications that seamlessly integrate with on-premises applications.



These software technologies enable a whole new category of solutions that power today's digital businesses. For example, BPM technology enables an explicit approach to modeling, automating, measuring, and optimizing business processes. These processes generally cut across organizational divisions, systems, and application boundaries. Web portals and self-service websites enable organizations to create engaging digital experiences for customers, partners, citizens, and employees. These middleware assets connect people, processes, and information in a cohesive way to deliver on the digital-business promise.

Case in Point: 7-Eleven

Consider 7-Eleven, the world's largest operator, franchisor, and licensor of convenience stores, with more than 53,000 stores in 16 countries. 7-Eleven wanted to build a digital experience platform that would allow bidirectional interaction with customers. Executives envisioned a system that could push location-based promotions to shoppers. They also wanted to reduce operational costs through faster provisioning.


To achieve these goals, 7-Eleven worked with Oracle to develop an innovative digital guest experience (DGE) program. 7-Eleven built DGE using Oracle Fusion Middleware on Oracle Exalogic Elastic Cloud. IT leaders at 7-Eleven selected Oracle Fusion Middleware because they wanted a standard middleware platform. They created DGE as a private cloud environment that leverages a shared repository of data, accessible by all DGE components. The Oracle Fusion Middleware infrastructure allowed 7-Eleven's IT group to dynamically provision infrastructure and middleware services on demand.

DGE analyzes consumer data to present real-time offers, such as a coffee promotion that rewards consumers with a free cup of coffee for every five cups purchased. The overriding objective of the project was to become more relevant to existing guests, to invite and engage new guest relationships, and to solidify loyalty to the 7-Eleven brand.

7-Eleven also wanted to provide guests with a consistent experience at each location and find a way to influence large numbers of guests quickly via social media. They saw their guests as highly mobile, increasingly reliant on technology, unique in their expectations, and value conscious.

Today, DGE delivers a cross-channel digital experience that engages customers with personalized offers based on their stated preferences and purchase histories, current product offerings, time of day, weather, and other variables. Soon after entering production the program encompassed about 8,000 stores. All 7-Eleven guests enjoy a seamless and secure sign-on process, with unified access for all types of mobile platforms. The new system features point-of-sale integration, customer relationship management (CRM) technology, and digital offers coupled with mobile applications. Transactions to a CRM system are executed in less than one second.

DGE yielded a measurable increase in revenue after only one month of deployment. The 7-Eleven app was one of the 10 most commonly downloaded apps in the Apple iTunes store and quickly resulted in a 15 percent increase in market-basket quantities per purchase. The coffee promotion alone increased daily app downloads by 250 percent and boosted app usage by 130 percent, with corresponding increases in traffic at the stores. This overwhelming response created the need to double capacity. The



IT team quickly scaled up from four to eight managed servers in live production without an outage. The customer-facing system is now processing more than 4 million transactions every day with a subsecond response time and 99.999 percent uptime.

Conclusion

A digital business strategy creates value and revenue from digital assets by forging connections among systems, people, places, and things. Digital businesses use technology to reach beyond organizational boundaries, to solve problems, and to weave a fabric of knowledge and expertise across communities of practice, helping people to embrace new models of work.

Oracle Fusion Middleware is uniquely positioned as the cloud platform for these digital business models. With its investment in platform as a service (PaaS), mobile, and IoT, Oracle offers a complete set of middleware products to help customers start their digital journey and expand it progressively across all five of the entry points discussed here. A piecemeal approach is no longer sufficient. Instead of cobbling together point solutions from multiple vendors, Oracle's unified middleware platform is built on open standards to ensure ongoing compatibility and success.

Oracle Fusion Middleware is the cloud platform for digital business—a foundation for a diverse set of integrated and personalized multichannel experiences. This evolving suite of software products can help you propel your business processes forward, mitigate the risk of change, and create a culture of innovation to ensure business leadership.

To learn more about the benefits of Oracle Fusion Middleware, please visit oracle.com/middleware.



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