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BUSINESS AGILITY AND PRODUCT DEVELOPMENT IN THE CLOUD

The concept of "business agility" represents the ability of a company to quickly and easily adapt its operations to fluctuations in the market. An agile business is one that is lean and adept at addressing the needs of its customers.

It's no surprise that cloud computing is a key tool of the agile business, thanks to the ability to offload some of the complexity and costs associated with daily operations. At the same time, there exist tools for adopting the cloud to run business and product development applications from anywhere in the world, which allows for increased, streamlined collaboration.

Reasons for Product Development in the Cloud

Businesses have listed a variety of reasons for adopting the cloud for product. Higher mobility was the number one reason respondents to Business Advantage's "CAD in the Cloud 2017" survey indicated they chose cloud-based CAD software (8.1 on a scale of 1 to 10). This was followed by "ease of software updates (7.4); "improved collaboration" (7.0), "better scalability of computing power, storage, and memory" (6.9); and "being able to pay only for what we use" (6.7). Of the companies surveyed, 82 percent reported that they saved money by moving to the cloud.

Time to market is another factor that drives cloud adoption. Businesses that adopted cloud services reported a 21 percent average improvement in time to market while 19 percent experienced an increase in process efficiency.

Efficiency and a reduction in errors have also proven to be lower in cloud-based environments. Of respondents to "Lifecycle Insight's 2013 3D Collaboration and Interoperability Study," 70 percent indicated they share design data through email, while 42 percent reported sending or receiving at least 100 design data files per month. Organizations exchanging more than 500 CAD files per month experience errors at roughly twice the rate of organizations exchanging fewer than 50 CAD files per month.

THE BENEFITS OF USING CLOUD COMPUTING FOR PRODUCT DESIGN

There are many ways to measure business agility in the context of product development including:

Scalability

The cloud offers ready-to-use resources for instant project or company ramp-up. Work can be performed 24/7 from any location, on mobile or fixed devices, and users can add new applications and services on-the-fly, whenever and wherever needed. In addition, advanced and innovative new features can be downloaded, installed and fully configured in minutes.

Competitiveness

The cloud's immediate deployment and ready-to-use capabilities enable every company to improve execution and accelerate time to market. It also provides all companies with immediate access to resources, instant access to enterprise-class technologies. This levels the playing field for startups and small and medium-sized businesses (SMBs). Deloitte surveys show that SMBs using cloud technology grow 26% faster and reap 21% higher gross profits than those who do not. And SMBs, having reaped early rewards from the cloud are adopting it as a primary platform at a much faster pace than large businesses. In parallel, large organizations are also realizing they need to adopt a cloud strategy if they do not want to be disrupted by the inevitable innovation shifts.

Profitability

Large and mid-size enterprises recognize the attractive cost benefits of the cloud. By providing access to subscription-based shared services, the cloud enables companies to eliminate IT equipment and administrative expenditures. It also enables them to shift IT spending from high capital expenditures (CAPEX) to low operating expenses (OPEX). And with flexible subscriptions and a pay-as-you-go model, financial risks are lowered along with total cost of ownership.

Innovation

The cloud is promoting experimentation and collaboration across business units. It frees organizations to focus on core business rather than IT administration. It frees IT capital for investment, and frees IT talent to focus on emerging technologies and business consulting. Finally, it bolsters strategic planning and visibility through real-time insight into the workflow of products and processes.

Reactivity and Agility

Cloud computing delivers benefits from two major trends in IT: IT reactivity, where the power of computers is utilized more efficiently through scalable hardware and software resources; and business agility because IT can now be used as a competitive tool, making it possible to perform powerful tasks such as business analytics, rapid deployment and parallel batching, and in real-time.

Sustainability

The cloud also provides solid support for meeting sustainability goals. On average, cloud-centered companies use 77% fewer servers, consume 84% less power and reduce carbon emissions by 88% compared to companies with full on-premise information systems. Through resource sharing and energy innovation, cloud providers have energy consumption and carbon emission rates that are 30% lower than for equivalent resources deployed on-premises.

Security

Large, established cloud IaaS providers have technical expertise and dedicated security resources that are beyond those of in-house IT teams. They are also at the forefront of innovations in information security According to the Cloud Security Alliance, the cloud is inspiring new solutions to old security problems: "a focus on greater automation, disposable infrastructure, agility among other concepts are changing how we deal with problems such as malware, forensics, denial of service attacks and compliance." Awareness of such developments may in part explain why businesses are increasingly identifying the desire to improve information security as their primary reason for adopting cloud services.

CASE STUDY

To get a better understanding of how elements of agility play out in a real-world example, consider French food distribution group Intermarché and cheesemaker Savencia. They have turned to the cloud in their quest to merchandie cheese at the supermarket in the most efficient way possible.

The two companies partnered with software maker Dassault Systèmes, whose cloud-based **3D**EXPERIENCE platform and its Perfect Shelf solution were selected to aid in the collaborative design process.

In designing planograms (diagrams representing the placement of retail products on shelves), the partners sought to bring customers to the point of sale as efficiently as possible. This involved improving the segmentation of shelves, drawing up plans and validating them.

Because the **3D**EXPERIENCE is hosted in the cloud, the product teams were able to collaborate within a shared environment, where data was instantly accessible and updated as the project proceeded. Decisions regarding the planograms were able to ultimately be executed more quickly, due to the fact that all stakeholders were involved throughout the entire process. Upon executing the new product placement strategy, the partners realized a 4 percent increase in sales as well.

OVERCOMING OBSTACLES TO AGILITY

Because adopting cloud technology may involve a complete shift in the infrastructure of a business, some firms may be reluctant to move product development to the cloud.

Security is among the first challenges that businesses associate with the cloud. To address these concerns, cloud service providers must ensure the use of access authentication and encryption.

For instance, the **3D**EXPERIENCE platform offers two-factor authentication, and communications rely on Secure Sockets Layer/Transport Layer Security with 128-bit encryption. Dassault Systèmes also employs a security team that tests platform services and software regularly, including with each new software release.

Another key challenge is actually getting data into the cloud. To ensure that a cloud service provider is capable of aiding the data migration process, it's important to know that the service provider has a plan to access its customer's current environment, create a migration strategy that serves its customer's needs while minimizing downtime, perform quality assurance and train staff on any changes to operating procedures.

Training is less of an issue for some product development environments. Most companies that offer product development tools in the cloud create an environment that is similar to desktop tools so that users are met with a familiar layout. In the case of **3D**EXPERIENCE, for instance, CAD tools, like CATIA, remain the same, except that the data is stored in the cloud.

Finally, potential cloud customers are naturally going to be concerned about costs. Migrating one's IT infrastructure can be a costly process, but when product development tools are offered in the cloud in the form of SaaS, the price one pays is dependent on the software one chooses to license.

CONCLUSION

In revisiting our concepts of business agility, the cloud is clearly demonstrated as a, if not the, key technology required for implementing agility within an enterprise, particularly when it comes to product development activities.

Factors such as scalability, worker flexibility, collaboration and mobility make it possible for businesses to quickly and easily adapt operations to meet opportunities in the market. The ability to add or remove software or licenses depending on the needs of a given project not only makes it possible to control costs, but also to remain flexible.

Accessibility for project stakeholders and members of the product design team means increased responsiveness to client needs and increased worker productivity. The ability to use these tools on mobile devices adds an extra level of accessibility, meaning that project team members can work on products off-site, as well as site-wide.

Thank you for reading. If you found this report useful, please share it with your colleagues.

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You can learn more about business agility on the **3D**EXPERIENCE platform at:
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