



**The Platform Of The Future—
Connected Applications In A Rapidly Changing World**

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Introduction

The business world is undergoing massive changes as factors, both internal and external, forever change the environment within which organizations operate. These changes, while delivering massive benefits in terms of agility, economics and competitiveness, also require a massive shift in the way IT operations deliver business solutions and challenge our existing thoughts around what IT should focus on.

We believe that it is increasingly the case that businesses need applications and solutions built upon a common platform to reduce barriers to agility. Applications residing in individual silos greatly reduce the speed at which business units and entire organizations can innovate, reduce the ability to share information between departments and obscure the operating reality for organizations.

In this paper we aim to set out the underlying changes that are impacting upon business, extrapolate where these changes will take organizations in the mid-term future, and detail why a common platform is critical moving forwards.

Part One— Change on an Unprecedented Level

Organizations of today are facing an unprecedented series of changes that have impact upon how they do business and the very nature of their organization. We contend that these changes, while discrete, have the combined impact of radically changing the foundation upon which business sits and hence what individual business units will look like into the future.

In order to understand what the future looks like, it is important to comprehend these discrete underlying trends. Using these key trends, we will investigate the reinvention of what an organization is and how it works. In a later section we will suggest what the organization of the future will look like.

The Global Financial Collapse, Capital Constraints and Global Competition

The Global Financial Collapse (GFC) was just one symptom of the massive economic changes occurring globally over the past decade. With the wholesale move to global production and global markets, and a corresponding shift of wealth away from traditional industries, we're seeing a resetting of the economic norms. One needs only to look at the list of the most valuable companies on earth¹ to see that many are in non-traditional industries – technology and design have replaced manufacturing and resources as the route to wealth. These statistics are even starker when looking at the world's most valuable brands² where non-traditional technology brands make up more than half of the top of the list.

With this immense value-shift from traditional industries to new-industry, we see a corresponding reduction in the need for massive capital requirements for growth. Scaling a Google, a Microsoft or an Apple, while still expensive, is far cheaper than scaling a company that drills for oil, builds railways or mines minerals. This reduced requirement for capital is fortunate since the GFC has also massively reduced the free availability of easy capital. As organizations are constrained in terms of the capital they can acquire to pay for expansion, they increasingly look for non-capital means to growth. One of these means is through hyper-scalable intellectual property based initiatives, another is the move away from capital expenditure and a corresponding focus on tying expenditure more closely to revenue.

At the same time as organizations are constrained by their access to capital, they face corresponding competition from new entrants. A well-resourced and focused China is increasingly building companies that leverage the 20 or so years' experience in engineering and manufacturing that the country has, and adding in the research and development that a massive focus on tertiary education fuels. These two things together produce some seemingly insurmountable challenges for traditional businesses.

A Demand for Agility

Partly because of the massive economic challenges detailed above, and partly because of a competitive landscape more difficult than ever before, organizations are increasingly focused on being more agile.

Enterprises are looking past their status quo and looking for ways to unshackle themselves from traditional large-enterprise bureaucracy and process to unlock innovation and hence help them to compete. One of the best-known case studies of this move from process and construct to agility and flexibility is that of Proctor and Gamble. In a 2006 paper³ which focused on P&G's approach to innovation, it was pointed out that:

“By 2000, it was clear to us that our invent-it-ourselves model was not capable of sustaining high levels of top-line growth. The explosion of new technologies was putting more pressure on our innovation budgets. Our R&D productivity had levelled off, and our innovation success rate—the percentage of new products that met financial objectives—had stagnated at about 35 percent... The world's innovation landscape had changed, yet we hadn't changed our own innovation model since the late 1980s... We discovered that important innovation was increasingly being done at small and midsize entrepreneurial companies. Even individuals were eager to license and sell their intellectual property. The Internet had opened up access to talent markets throughout the world. And a few forward-looking companies like IBM and Eli Lilly were beginning to experiment with the new concept of open innovation, leveraging one another's (even competitors') innovation assets—products, intellectual property and people.”

P&G set the aim of acquiring at least 50 percent of its innovations from outside the company. This isn't a reflection on innovation per se, rather it is a tacit admission that it is the lack of agility, created by regimented and hierarchical workplaces, that often limits the growth and profitability opportunities for organizations.

This lack of agility is now well recognized and organizations globally are searching for ways to enable agility to occur across the organization. This drive for agility is well demonstrated by the unprecedented levels of individual employees and business-units making their own technology decisions. This so-called “Rogue IT” or “Shadow IT” is occurring across industries. A recent survey⁴ has suggested that one in five business users surveyed admitted to using Dropbox, an example

of one of the lightweight tools being brought into organizations without an IT department mandate. Even more worryingly, of those who confirmed that they use Dropbox, fully half do so despite knowing that it is against company policy.

Given that Dropbox claims a user base of hundreds of millions of individuals, and that many of these users are reportedly within enterprise settings, it is not difficult to extrapolate the survey results and conclude that IT is being circumvented on an unprecedented scale – in part because of its failure to deliver what the business needs.

A New Workforce

The days of individuals working for one organization for their entire working life are gone. We now have a far more organic organizational structure with far more people involved in project work and moving from role to role. At the same time, even within the pool of permanent employees, there is an increasing occurrence of distributed teams working together on a single project. Flexible hours, virtual and global teams and a demand for technology solutions that mirror this flexibility is changing organizations' perspective on the solutions they need.

At the same time as these organization changes are happening, we see a new generation entering the workforce. Much has been written about the Rise of the Millennials, those people born around the 1980-2000 timeframe. While there is some argument about the specific time-period the term "Millennials" relates to, what all researchers do agree on is that this group represents an incredibly large portion of the population in all markets across the globe.

In the seminal work⁵ describing who the Millennials are, Claire Raines opined that:

“They’re sociable, optimistic, talented, well-educated, collaborative, open-minded, influential, and achievement oriented. They’ve always felt sought after, needed, indispensable. They are arriving in the workplace with higher expectations than any generation before them — and they’re so well connected that, if an employer doesn’t match those expectations, they can tell thousands of their cohorts with one click of the mouse. They’re the Millennial Generation... nearly as large as the Baby Boom, and they’re charged with potential. They’re variously called the Internet Generation, Echo Boomers, the Boomlet, Nexters, Generation Y, the Nintendo Generation, the Digital Generation...”

These Millennials have grown up with a very different understanding of the workplace, and their world in general. The first generation to grow up with the regular use of digital media, and the global ease of communication it brings, this generation puts particular requirements on organizations as they enter the workforce. These Millennials don’t regard technology so much as a tool, but rather as an extension of themselves. As author Don Tapscott wrote in his book *Growing Up Digital: The Rise of the Net Generation*⁶

“Computers and other digital technologies, such as digital cameras, are commonplace to N-Gen members. They work with them at home, in school, and they use them for entertainment. Increasingly these technologies are connected to the Internet... Constantly surrounded by technology, today’s kids are accustomed to its strong presence in their lives. Today’s kids are so bathed in bits that they are no more intimidated by digital technology than a VCR or a toaster. And it is through their use of the digital media that N-Gen will develop and superimpose its culture on the rest of society. Boomers stand back. Already these kids are learning, playing, communicating, working, and creating communities very differently than their parents.”

The catchy phrase relating to Millennials (or N-Gen members as Taspott called them) was that they grew up “bathed in bits”. This factor alone indicates the expectations of this generation when they enter the workforce, and the unique challenges that this generational shift introduces.

Technology Democratization

The need for agility, the demands of Millennials and technological improvements have led to a wholesale democratization of IT. If we think back to only a few decades ago, technology was in the hands of a very select few technicians who generally worked in cold, dark basements. The rise of the personal computer changed that and resulted in the ability for an organization to put a “computer on every desk.”

This spreading of technology was just the very start of the trend, and it has been the growth of mobile access, smart devices and cloud computing that has led to a point where data can be put in the hands of any employee, anywhere in the world nearly instantaneously.

Cloud Computing has also had an impact by moving the buying decision for technology products from centralized IT to individual business units. In the past a technology purchase – be it hardware or software – generally required capital expenditure and hence a rigorous approvals process. The rise of Infrastructure as a Service (IaaS) means that organizations can acquire technology infrastructure on a utility basis. A business unit has the ability to build itself a virtual data centre, just by using a cloud provider and a credit card.

Similarly software has been democratized. The rise of Software as a Service (SaaS) vendors has resulted in business units making their own software buying decisions and acquiring SaaS outside of the purview of central IT.

Finally the provision of individual interfaces to technology has been democratized. The rise of “Bring Your Own Device” BYOD, has led to a deluge of individual employees within organizations having the ability to buy, run and manage their own hardware (laptop, smartphone etc...) This democratization is positive in that it drives choice for consumers, but it is also difficult as it challenges the traditional approach towards IT.

We have already detailed the massive uptake of one example of democratized technology, Dropbox – we only need to extrapolate this across the plethora of new and readily accessible technology offerings in the marketplace to see how large an effect the democratization of technology has on the technology landscape.

This technology democratization delivers agility and flexibility, but it also introduces new challenges to organizations. It highlights the increasingly obvious friction that occurs between IT and the business and speaks to a fast-approaching watershed moment when business users finally revolt en masse in reaction to the perceived reluctance of enterprise IT to deliver what they need.

Part Two— The Organization of the Future

If we take these concurrently occurring trends together: a rapid shifting of the economic landscape, a huge demand for organizational agility, the rise of a new generation of workers and the dual aspects of technology democratizations and IT friction, we see the creation of organizations unlike those ever seen before.

In the mid-term future, organizations will make far higher use of external parties for discrete parts of their business – yesterday that took the form of the outsourcing of production. Today we're seeing greater levels of outsourced R&D. The future will see organizations that, in their very essence are organic, that morph and change on a project-by-project basis.

This trend will see a huge increase in the number of people who work remotely, who work for an organization on an ad-hoc basis, and who use a wide variety of work tools and techniques to achieve their desired outcomes.

Many of these tools will be technology based and hence this shift will place unique challenges on an IT department already juggling a multitude of different solutions. While in the past IT has been responsible for managing a relatively stable and constrained workplace, it will suddenly be tasked with managing a workplace that has limited physical bounds, a very fluid definition of employee, a plethora of different technologies in use, and an ever-increasing demand for the flexibility to meet all those drivers. This is where common IT platforms deliver their value.

We believe that for a number of reasons, the most successful organizations going forward will be ones who leverage a consistent technology platform across their organization. Their ERP solution should live on a consistent platform with their CRM solution that should co-exist with the PSA solution, etc. Every functional area across a business should be utilizing a common platform to increase agility and reduce the existence of data silos.

Part Three— The Benefits of a Consistent Technology Platform

Modern IT and the Perils of Building IT on the Ruins of the Last Epoch

As we have detailed previously, organizations of all types are operating in a highly dynamic and uncertain environment. Given this factor, they need tools and processes that give them the ability to respond to threats and opportunities as rapidly as possible.

Unfortunately, modern IT has been built much like ancient civilizations – on the ruins of what has gone before. And similar to the way that ancient cities are a hodgepodge of disconnected and incongruent themes, many organizations' IT systems live in different databases, utilize different technologies and have no consistent reporting solutions.

This is problematic on a number of levels. Firstly, having to utilize different systems and having to enter information into multiple locations is a big drain on efficiency and accuracy. Whenever human intervention is required to ensure that data is updated accurately in multiple locations it opens up the opportunity for human error to occur.

However the accuracy of information is one of the less troublesome impacts of siloed solutions. When it comes to building new capabilities, or changing the way processes work, or encouraging the utilization of pan-organizational teams, it is difficult, time-consuming and expensive to do so across disparate solutions.

Since businesses tend to work in teams and, as detailed previously, since these teams change on a regular basis, having different solutions between departments hampers collaboration. If an opportunity for innovation exists within the business, but that opportunity requires the collaboration of members from a range of different departments, it is highly problematic when individual technology systems prove a barrier to that collaboration.

New Form Factors Increase the Complexities

If flexible teamwork wasn't enough of an issue for legacy IT systems, we have an ever increasing number of devices needing to interact with technology. While it has long been discussed that the rise of smart phones places challenges upon technology departments wanting to enable broad access, there are more challenges on the horizon.

Analyst firm Gartner predicts⁷ that some 30 billion devices will be connected to the Internet by 2020. But whereas traditionally connected devices have been variations on a theme (a laptop versus a desktop versus a smart phone), the variety of devices needing to interact with applications will broaden hugely in the future.

Already we are seeing increasing uses of sensors, devices designed to measure a particular attribute, and the demand for these sensors to be an integral part of organizations' data flows.

Legacy approaches towards technology solutions aren't well placed to embrace this plethora of connected devices and only broad technology platforms, built on openness, extensibility and flexibility, can deliver what hyper-connected organizations require.

As organizations increasingly exist within a hyper-competitive marketplace, being able to offer customers the very best experience, personalized service and products attuned to their needs is key to differentiating from one's competitors.

Delighting Customers

So far we have mainly written about how technology can be a barrier in the way of furthering the internal aims of the organization, but there are myriad externally-facing requirements that need to be borne in mind when choosing a technology platform.

Today, more than ever, organizations are aware that they need to be engaged in an ongoing conversation with their customers, wherever they may be. The integration of social media into internal systems, the integration of customer service solutions with core back office systems and the increasing visibility of external customers across internal systems is important.

Increasingly organizations are responding to rising competition by adding value-added peripheral products and services around their core products. In order to do so in an agile and meaningful way, a consistent platform that covers social interactions, back office transactions, customer support and marketing is required. The emergence of the service economy is enabled by the use of integrated technology solutions.

The issue comes, however, when all of that data lives in disconnected and disparate solutions. It is very hard to know the intersection of existing customers, social media sentiment and the service history of a particular product unless the individual solutions capturing those different data points exist on a common platform.

Analytics, the Promise Of Cross-Functional Insights

Organizations far and wide are starting to understand the role that predictive analytics is playing in their operation. Given the ever-increasing amount of data that exists both within an organization's core systems and on the broader Internet, it is understandable that there is a desire to mine that data for valuable insights.

By resolving to a common platform, organizations can make more rapid use of predictive analytics to better inform their product, sales and marketing strategies.

Apps— The Secret Sauce of the New Organization

In a recent book⁸, RedMonk analyst Stephen O'Grady posited that developers are the new organizational kingmakers. O'Grady's perspective was that, in a world where applications are increasingly the way customers interact with an organization's products and services, that those who create the applications themselves will be increasingly powerful. In a similarly themed article⁹ legendary technology entrepreneur and investor Marc Andreessen stated that "software is eating the world."

Given this increasing importance of applications, organizations need to think about their technology platform within this construct. A platform that is created to simply run applications created by the platform vendor itself, or from a small number of approved software vendors, is sub-optimal going forward. Rather, a connected development platform that is intrinsically tied to enterprise data, and that is natively connected to social media, helps to deliver upon this opportunity. A platform should embrace application development and enable configuration, multi-device deployment and rapid iteration.

Value at all Stages, Connected Platforms for Businesses Large and Small

While many people believe that this vision of a single connected platform running all of an organization's operations is only relevant for very large businesses, we believe that there is value to be found in this approach for all businesses. A connected and unified platform works for organizations of all sizes.

For smaller businesses that are looking to grow, there is a tendency to make do with ad hoc solutions. Often these businesses will use some home built solutions and try and tie them together with a few different applications. While it is an approach that might meet their short term needs, it is by no way a solid foundation for growth and, at best, will slow the small business' ability to grow and, at worst, constrain its growth altogether.

For larger enterprises, disconnected and siloed applications create reduced speed, which is a distinct disadvantage when it comes to competing in a robust marketplace. The ability to innovate rapidly, off the back of natively connected solutions, gives an enterprise the best chance of success.

And for those organizations looking to grow or to IPO, having a consistent platform makes for an easily navigated audit trail. Common approval processes, tight controls across applications and visibility built into the core all makes compliance easier.

Conclusion

The organization of the future is a fundamentally different beast from the organization of the past. It is more agile, more organic in nature, more proactive to opportunities and spread far wider – both virtually and physically. As such the tools the organization will need to use in the future will be different from the ones they need today.

The trends causing organizations to change are both powerful and increasing in velocity - a rapid shifting of the economic landscape, a huge demand for organizational agility, the rise of a new generation of workers and technology democratizations all do their part to fundamentally shift the business environment going forwards.

Given these changes, it is obvious that only through utilizing coherent and consistent technology platforms can organizations give themselves the best chance of success.

Whether an existing organization is trying to avoid disruptive forces or a new organization is trying to disrupt incumbents, success going in the future will rely on broad technology platforms enabling collaboration, innovation and agility.

About Diversity Limited

Diversity is a broad spectrum consultancy specializing in SaaS, Cloud Computing and business strategy. Principal and founder Ben Kepes provides various services including:

- Commentary – Ben is a noted commentator about Cloud Computing and enterprise software – he has written for a broad selection of media outlets, and is often quoted as a subject matter expert and influencer.
- Consulting – Ben is in demand with large organizations who turn to him for advice on technology starting. He spends time with both customers and vendors advising on all aspects of their strategy.
- Advisory – Ben sits on a number of boards, both formal and informal. He enjoys helping startups get to market and grow to scale.
- Investment – Ben is an investor in a number of different companies. These investments revolve around Ben's focus of delivering technology that can make a difference in how organizations work.

About the author

Ben Kepes

Ben Kepes is a technology evangelist, an investor, a commentator and a business adviser. His business interests include a diverse range of industries from manufacturing to property to technology. As a technology commentator he has a broad presence both in the traditional media and extensively online. Ben covers the convergence of technology, mobile, ubiquity and agility, all enabled by the Cloud. His areas of interest extend to enterprise software, software integration, financial/accounting software, platforms and infrastructure as well as articulating technology simply for everyday users.

He is a globally recognized subject matter expert with an extensive following across multiple channels. His commentary has been published on Forbes, ReadWriteWeb, GigaOm, The Guardian and a wide variety of publications – both print and online. Often included in lists of the most influential technology thinkers globally, Ben is also an active member of the Clouderati, a global group of Cloud thought leaders and is in demand as a speaker at conferences and events all around the world.

As organizations react to the demands for more flexible working environments, the impacts of the economic downturn and the existence of multiple form-factor devices and ubiquitous connectivity, Cloud computing stands alone as the technology paradigm that enables the convergence of those trends – Ben's insight into these factors has helped organizations large and small, buy-side and sell-side, to navigate a challenging path from the old paradigm to the new one.

Ben is passionate about technology as an enabler and enjoys exploring that theme in various settings.



About FinancialForce.com

FinancialForce.com delivers ERP at Customer Speed™. Built on the Salesforce Platform, FinancialForce ERP equips customer-centric businesses with a unified cloud platform and all the applications necessary to grow both the top and bottom line. Our Financial Management, Human Capital Management (HCM), Professional Services Automation (PSA), and Supply Chain Management (SCM) apps allow businesses to increase the speed in which they operate and be more responsive along every touch point of a customer's journey. Founded in 2009 and headquartered in San Francisco, FinancialForce.com is backed by UNIT4 and salesforce.com.



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Endnotes

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