Mobility – More Than Just the Next Tech Hype

Thoughts and Facts About Mobility From a Business User Perspective
Management Summary

This white paper introduces the current state and possible future of business mobility. Is mobility merely a tech hype or is there more to it? How relevant is this question anyway? Methodological background, facts and expert voices, as well as the development, dissemination and use of smartphones provide important insight and answers. Moreover, the document delivers background buzz on “killer apps” and highlights a couple of future trends: What kind of development is realistic? Which approaches are least likely to succeed? What does a killer app look like? An indisputable level of uncertainty will remain, naturally, but the author provides guidance and inspires further thought on mobility.

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Berlin based Klaus-Christoph Müller is Director Global Business Solutions at itelligence. Generally focusing on the development of the industry solutions at itelligence, he has a long history in business development and strategic consultancy as well as in solution development and presales. Starting in the Automotive Industry, and working with Volkswagen and DaimlerChrysler Financial Services (now Daimler AG) in various expert and management positions, Klaus-Christoph has a long track record in creating business value through innovative technologies. Thus, stepping into mobility technologies in general and various mobile solutions offered by SAP came more or less as a natural choice.

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Welcome to the Age of Mobility

Mobility: It is in the papers, on TV, virtually everywhere. A few years ago, you would find it used primarily in the fields of demography and social geography. Today, “mobility” more often refers to giving mobility to employees as enterprise processes cross the brick-and-mortar boundaries of a company. There seems to be little doubt that our good old PCs and notebooks will sooner or later be replaced by smartphones and tablets. According to IDC, 660 million smartphones were sold in 2012 – against 494 million worldwide in 2011.

The unstoppable rise of smartphones and tablets will continue and see 1.2 billion of the devices being bought worldwide in 2013, as analyst Gartner is predicting. Since the introduction of the iPhone in 2007, this is an incredible success story.

The Unstoppable Rise of Mobile Devices

Small, handy, and with all the required data stored in the cloud, these clever devices will enable users to load and access important business data almost instantaneously via apps — wherever and whenever we need them. But is it really that simple?

The challenge is to develop valid business cases for mobility. «

In a business context, few things are ever that easy: “It is not only about opening some Excel spreadsheets on the smartphone,” says German analyst Tobias Ortwein.

The challenge is to develop valid business cases for mobility. So, the big question to be answered is whether and when mobility will pay off in an enterprise context. This is the purpose of this white paper. While everyone’s euphoric about the future in a bright new mobile world, the facts do not seem to support that optimism. Well, at least not at first sight. When we take a close look at trends, facts and figures, this analysis shows clearly that mobility is not just hype. On the contrary, companies should make up their minds – right now – what they want their individual strategy to look like.

Apps are a crucial element in mobile strategy. They dominate the public as well as the business discussions. What will potential “killer apps” look like, and how will they shake the industry to its foundation? To state our findings clearly, we do not expect to uncover the “one size fits everybody” app. Why? Find out below.
Of Hypes and Tsunamis

The main question of many decision makers is: Will mobility become just another outdated fad? This skepticism is easy to understand, since many past trends in technology failed to meet their expectations. But even if many of these predictions turned out to be inaccurate, progress was still accompanied by fundamental changes. Isabella Mader, CEO of NetHotels AG and Lecturer for Information Science, Knowledge Management and Social Media, has chosen a tsunami to illustrate this effect.

Following a tsunami, the coastline is fundamentally altered. Something similar happens once a hype cycle hits an industry – conditions will have changed so that there is no way to return to the previous state. One of her statements seems apt for mobility: "Any technology or innovation surviving the first crushing against the shore of consolidation, challenge, frustration and disappointment will have become stable enough for a sustainable further development."

Understanding Technology Hype

However, the question remains: When a new technology makes bold promises, how can you separate pure hype from what really is creating value and when will such claims pay off, if ever? The US research and consulting company Gartner has developed the Hype Cycle model, which visualizes the degree of maturity and adoption of technologies and applications. What is their potential to solve real business problems and exploit new opportunities? Their model enables decision makers to “get educated about the promise of an emerging technology within the context of their industry and individual appetite for risk.”
For example, in an ERP context, master data management is currently a vale of tears after being considered an all-important issue receiving major management attention. Though it is still an important topic, several lessons learned during implementation have brought expectations down to earth and led to a reduced number of projects.

Should your company move quickly or wait? In general, the Gartner model could help with such questions. If there are too many ifs, ands or buts about the business value of an emerging technology, it would usually be better to wait until others have been able to deliver tangible value and expose unexpected issues.

However, the first consideration should always be a proper judgment of the current situation. If mobility were still in the “technology trigger” phase, it would still be a technology waiting for the potential breakthrough. Given the number of mobile devices already sold and the incredible success stories of Android and Apple, mobility is clearly beyond breakthrough. Yet, since the number of business-linked success stories is limited, its commercial viability has still to be proven.

In addition, the so-called “plateau of productivity”, where mainstream adoption starts to take off, has yet to be reached. For business applications, mobile technology’s broad market applicability and relevance have not been fully recognized. Nevertheless – or maybe therefore – it is important to start planning right now. Remember: Things are never going to be the same as before.

» Given the number of mobile devices already sold and the incredible success stories of Android and Apple, mobility is clearly beyond breakthrough. «
Do You Remember Nokia?

There are several examples of formerly leading companies that missed the arrival or importance of new “hypes”. Maybe you should have a chat with colleagues at Nokia about their opinion on the relevance of mobility …

By setting the de facto standard with Symbian, its groundbreaking operating system, Nokia became the undisputed market leader in cell phones for more than 14 years, forcing big players like Siemens out of the market, or others such as Motorola into risky takeovers.

But even at the peak of Symbian’s success, there were many critics of their outdated platform-technology strategy. As it turned out, the restrictions of the “closed” Symbian platform closeted all development effort for new functionality within Nokia.

The invention of the app store concept by Apple changed the game completely. Once independent developers contributed individual apps for all kinds of functionality to Apple and Android, Nokia had not reached a significant share in the profitable smartphone market, having to settle for the less attractive mass market. Nokia realized a loss of 1 bn. EUR in the first quarter of 2012. In the meantime, they switched their platform to Windows Mobile. In our opinion, mobility is here to stay. Why? Let us have a look at some of our reasons.

Overall Social Trends

The amazing success story of smartphones and tablets would not have been possible without the general social trend towards personalization and individualization. You will rarely, if ever, find two smartphones with the exact same configuration simply because it is a personal device that fits the specific needs of its user with tailored applications at an affordable price. However, what may be more important: It is available whenever you need it, wherever you go.
The Always-On Society

As a perfect companion in times of social media, mobility keeps us close to friends, family and different communities, even on a holiday or a faraway business trip. What is even more important: It has increasingly blurred the line between work and private life (which comes with downsides). On the one hand, business users can quickly review and complete work activities outside the normal confines of work hours. On the other hand, they can arrange personal things within work hours.

For “digital natives” brought up with digital devices and the Internet, the close linkage between private and work life should be less of an issue. The next generation of digital business workers will presumably always be “on”, organizing themselves via social networks, whether for private or business life. As smartphones perfectly fit today’s lifestyle, their stunning market success should be sustainable during upcoming years. In commercial terms, this is clearly a proper business case for strategic investments. Facebook’s $1 billion revenue in 2011 may be an extraordinary example, but there are many other such success stories.

People used to mobile technology in their private life also expect it at work. According to an IDC research, around 95 per cent of all employees already use a private mobile device at least occasionally for business transactions. Here we have the rather unusual situation of consumer technology spearheading the level of business use.
Entering Global Markets

The globalization of business has had a huge impact on small and midsized companies, which have become international players. In many areas, they can compete with large enterprises on a global scale. In order to stay or become successful in this environment in 2013 and beyond, you have to move fast and be cost effective. Above all, you have to be available 24 hours a day, 365 days a year.

Immediate access to information has become a critical success factor – absolutely vital to making the right decisions at the right time, to providing excellent customer service, and to making timely cost-reduction measures. At least parts of existing ERP functionality and services have to become "mobilized". On-premise access to critical business information and processes is no longer enough.

Numerous scenarios prove the business value of mobility. For example, timely information updates via mobile access help avoid redundant information or input errors. A field-service expert can report on efforts at a customer site without measurable delay, which enables service organizations to provide faster response and better, more cost-effective solutions to their customers.

Smartphone and mobile-device solutions are already present in the globalized business environment; the more this trend accelerates, the more important mobility becomes.

The Current Impact of Mobility on Business

The growing number of devices is impressive. At SAP, for example, the use of smartphones and tablets has significantly increased within the past two years – above all in management, sales, field services, and so-called "mobile wannabes". In 2012, SAP had 22,000 Blackberry users, 5,000 iPhone users and around 10,000 iPad owners. So, out of totally 50,000 employees, around 37,000, or 74 per cent, are "mobilized" already. And privately owned devices (see "Bring Your Own Device") are not included here.

SAP, as an IT company, may not be representative of business as a whole, but the overall trend can be seen in many other companies from different sectors. Even without specific business applications installed, smartphones make businesses more efficient and provide access to important information for decision makers. For most of them, work would now be impossible without apps for things like online check-in, hotel reservation, travel planning, email, text messages and calendar access. Many generic and formerly consumer-only apps have established themselves as all-important tools for successful IT management within companies – networking tools, remote desktops, VPN clients or tools for Exchange synchronization.
Their positive effect on productivity is significant: According to a survey, employees allowed private and business use of their mobile devices are voluntarily working an average of 240 hours more per year than those not given this permission. Considering this, the freedom to deploy your favorite personal device anytime and anywhere will become an imperative for any company, especially for the growing number of employees looking for maximum flexibility in their everyday work.

Viewed from a different angle, Gartner analysts state that the use of personal devices is elevating the acceptance of users to a new level. When companies take the individual preferences of their workforce into account, the satisfaction – and hence, the productivity – of business users rises. Moreover, the higher the acceptance, the larger the sense of responsibility, the analysts predict. They also sense a potential for sourcing costs reductions through allowance plans, reduced responsibilities and maintenance.

Not Hype, but a Part of Everyday Life

Therefore, considering all these facts, research results, and trends, we have to recognize that mobility is not mere hype but already a fact of everyday life. Nevertheless, it has yet to achieve its full potential within a business context. Getting to that full potential requires work. Although iOS, Android and other operating systems for popular mobile devices are already common in business landscapes, they are rarely fully integrated within core business processes and functions, not even in the US, Scandinavia, Germany or other advanced countries.

The good news is that there is still much potential to be tapped. The “bad” news is that it is high time for companies to develop a mobile strategy that is powerful yet flexible enough to deal with the growing number of mobile devices and operating platforms.
Companies without a well-defined mobility strategy, consistent guidance and a comprehensive administration concept will struggle to tap the productivity potential of mobile devices and lose money. Successful companies require a proper analysis, a clear direction and appropriate controls in place. They must also pick the right apps. Furthermore, what does the ideal business app look like? Is there really an individual “killer app” at all?

Striking for the Killer App

“In marketing terminology, a killer application (commonly shortened to killer app) is any computer program that is so necessary or desirable that it proves the core value of some larger technology, such as computer hardware, gaming console, software, a programming language, software platform, or an operating system. In other words, customers would buy the (expensive) hardware just to run that application. A killer app can substantially increase sales of the platform on which it runs.”

Companies without a well-defined mobility strategy will struggle to tap the productivity potential of mobile devices. ©
A good example is the app store concept – it can be seen as a killer app itself – which enables the user to create a personal function to fit an individual need and even to market it.

Another example of a killer app is the push-mail functionality introduced by RIM for the Blackberry. More recently, built-in GPS navigation capabilities delivered via smartphone apps are replacing dedicated navigation devices and in-car systems. Generally speaking, a killer app can be characterized as standardized, applicable to many users, easy to use, and attractively priced.

Killer Apps in Business Environments

What could a potential killer app within an ERP, general business context or within a SAP ecosystem look like? Let us try to define its main characteristics: It would be a single app that covers almost everything a typical business user requires in everyday routines. Alternatively it would provide one or more unique functions supporting important areas of business across multiple industries.

Despite intensive research, we found no references to a single killer app that supports everything a business user requires. To be honest, we did not expect to, for the simple reason that business processes are typically comprehensive and complex. That inevitably leads us to the downside of the rich functionality provided by most business systems.

If someone were to try to develop an app providing similarly rich functionality, while at the same time allowing business users to select the parts they need, the developer would probably end up with an app version of, for example, the SAP GUI. Furthermore, supposing the development of a single killer app was possible, the project would a) require tremendous up-front investment, and massive, dedicated resources, without b) having any prospect of quick profits. In other words: It could be undertaken only by large, powerful organizations.

This approach would be completely out of sync with the agile and fast spirit of modern app development. Before the project could be half completed, smaller apps would already have been developed and have taken over the potential market. And even if the mission were finally successful, others would quickly copy and improve on the killer functionality that took so long to create. Goodbye to investments and profits!
Keep it Simple and Make it Useful

The success story of smartphones is based largely on usability and quick benefits. In the future, mobility will have more users who have never experienced classic PCs and business software. On the one hand, they will be less familiar with IT use and need more user-friendly applications. On the other hand, mobility is the key that lets companies reduce error rates and redundancies through automatic data synchronization between mobile apps and core business systems.

» Mobility is the key that lets companies reduce error rates and redundancies. «

App providers will need to develop business apps that are business-generic enough to be reused by different customers. The most extreme approach would be to exactly match existing customer apps, with no additional consulting effort needed. But in a business context, this would likely prove impractical. For apps such as time management, financial or available-inventory reports, at least some configuration and adaptation will be required to create a good user experience. Total individualization, however, would be hard to achieve: Individual users will have to scroll through many entry fields that are irrelevant to their duties, but these fields need to be included because they are required by others.

A good starting point is to organize the information hierarchies, because many ERP functions return large, complex data sets (lists of employees, invoices, product catalogs, etc.). Fortunately, there are several methods for simplifying deep information hierarchies: using categories, displaying relevant filter criteria, or designing screen layout to depict data relationships. To get the right effect, you have to look closely at the particular needs, behaviors, and context of your mobile user. The user becomes the center of the universe – what business functions does the user really need converted to mobile apps to become a satisfied and highly productive employee?

This change in approach represents a paradigm shift: Previously, developers of enterprise systems put user friendliness and interactive design at the bottom of their to-do list. But now, in the wake of mobility, business processes and transactions have to be rethought to include how the user can operate them as simply and effectively as possible.

It is a good idea to get end users engaged in the development process at the earliest possible stage; agile methods now enable them to provide valuable feedback on prototypes and visualizations. Thus, the aim is to keep it flexible, make it modular and useful, and not overload a single app with tons of functionality. The user does not expect the “jack-of-all-trades app” and probably will not accept it either.
The Strategic Dilemma

The more you think about mobility, the clearer the strategic dilemma gets: From a market perspective, you could on the one hand go for an app that addresses a large number of potential customers. However, this would require a high level of standardization in function. From a business-user perspective, it could only support commodity processes, focusing on quick cost savings and allowing for little differentiation from the competition. Organizations would not be willing to pay a high price for an app that provides only little extra competitive edge.

On the other hand, you could develop apps that support the core business processes that give an organization unique competitive advantage. But there will not be a broad audience for such a highly customized app.

Ideal Areas for Mobilization

Considering this, it is no surprise that we come across any references to a singular functional mobile app that was seen as a vital business requirement. So, while many experts are still desperately searching for the next business “killer app”, we deem the probability of finding one as very low.

Instead, we recommend re-adjusting the focus, no matter whether business-to-business transactions are involved, or whether self service offerings for customers or employees are at the top of your agenda: The desire for mobile functionality revolves most around daily business transactions – routines that often have to be performed out of the office (reviewing financial data or sales reports, checking inventory levels, creating and transmitting new sales and purchase orders, etc.). All of these transactions are important, but none can be labeled as critical to business success. This makes them ideal candidates for “off the shelf” preconfigured apps bought from a business-app store.

Functional and domain-specific packaged apps that align closely with certain business areas can provide substantial value. But watch out for flexibility!
In general, an ideal area for mobile-apps support is sales and after sales services, often collectively referred to as customer relationship management (CRM). Most CRM use cases have been around for years. But only since smartphones became broadly available has it become affordable and realistic to fully realize them.

Mobility can help create both quick and sustainable wins. For example, if field employees and service-center agents urgently need the latest information on a customer, they can operate on the principle of “one voice and one face to the customer”. Extra value can be created by connecting mobile scenarios with context-sensitive information, for example, based on the actual location.

Another important area for generic mobile applications is analytics, also known as business intelligence. Since analytics has become a massive challenge for many companies in recent years, the pressure to deliver such data on mobile devices is steadily increasing. Many experts see reporting options and dashboards as core applications for tablets. Moreover, with bigger screens available and interactivity becoming a commodity, both the requirements and the demand are increasing.

This sets the agenda for new challenges in usability, speed and relevance. You have to balance the user’s wishes against the bottom-line effects, especially with reference to finding the right business-use cases and securing a decent return on investment.

How About Industry-specific Killer Apps?

The final track to follow is to look at specific industries and their requirements. One industry often mentioned in this context is healthcare, where mobility is extraordinarily important. Other examples include the consumer goods sector and the chemical industry, where traceability or product information fact sheets are hot topics. But even apps with industry-specific functionality will be little more likely to become “killer apps”. Why is that?

The blog “How to Stop Searching for PLM Killer App?” puts it in a nutshell: Since each company’s details are so specific and companies are always trying to differentiate themselves from their competition, it is almost impossible to develop a general application that matches every requirement. So, in the end, if competitive advantage can be gained only through individual processes, you are forced to define and develop your own highly individualized app. This can range from an improvement on existing processes to thinking completely “out of the box”.

» One has to balance the user’s wishes against the bottom-line effects, especially with reference to finding the right business-use cases and securing a decent return on investment. «
This goes hand in hand with high risk, extended development cycles – and rising costs. However, all this can be reduced by integrating or combining various applications and re-using proven framework technology. The latter applies especially where existing processes are completely re-designed using mobile apps.

Mobile Apps for Business and User Groups

Summary: What is the Bottom Line?

No matter their source, all market-share figures for smartphones and tablets point in the same direction: Mobile devices will outsell traditional PCs and notebooks over the next few years. And while the sale of mobile devices is expanding dramatically, Internet traffic is rising exponentially. There are already more than 1.5 billion Internet connections on non-PCs, and ten times more mobile Internet connections than through traditional broadband access.

These figures are still dominated by private use, but consumerization will not stop at the borders of your company. As indicated above, the separation between privacy and work life is vanishing. Many companies already use mobile devices widely, but only a few tap their full potential.
Why does much of mobility’s potential remain untapped? As with any pioneering technological change, the perception in many companies is dominated by uncertainty: What is the business value of apps in our individual business environment? Where do we start? How can we determine the return on investment? How can we benefit as quickly as possible? These questions can be answered only through in-depth analyses of individual requirements that correlate a company’s business model, industry environment and mission-critical processes.

Quick wins seem most likely in highly standardized, routine processes, where apps can deliver more spatial and temporal flexibility. Administrative processes such as expense management provide a good example. Above all: Be open minded and take a chance on all kind of functionality, no matter whether it is in an B2B, B2C, B2D(ealer) or B2E(mployee) context.

Strategically, the areas of analytics, business intelligence and decision support look at least as interesting and important. Fast, informed decisions based on current figures open up a huge competitive advantage in international competition. This applies to both management and mission-critical areas such as sales.

By contrast, an industry-specific mobility strategy needs more careful consideration. The main concern is whether preconfigured apps (if any) are both affordable and flexible enough to be adapted quickly to new requirements. There is no panacea for developing a mobility strategy, but one thing seems certain: Due to the high cost and effort involved, individual developments will be suitable only in exceptional cases.

Whatever direction mobility may take – in general and for your company in particular – this much is definite: Things will not remain static. As key trends clearly point out, the time to make up your mind about mobility is now. Hopefully, we have provided some food for thought in making your decision.

Read more

Are you already thinking about where to start and how? Then find out more about the technical side of mobility in the next white paper. For further information, please contact the author or visit us online at: www.itelligence.info
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