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Heroes get the glory, but soldiers win the war

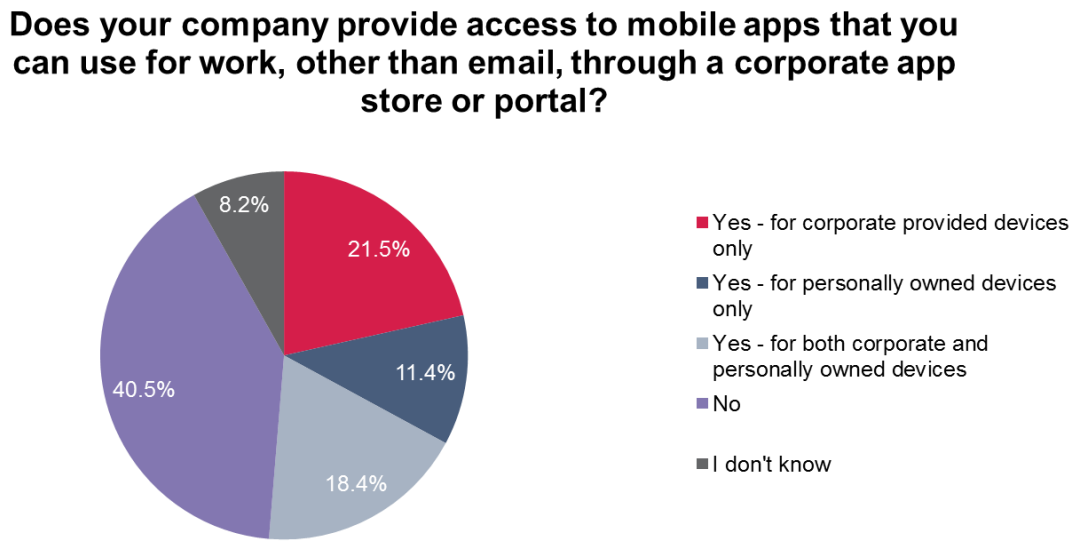
Harnessing the real transformational power of mobile enterprise apps

Summary

Introduction

Employee-facing, mobile enterprise apps are a hot topic of conversation, and more than just that – they are something that numerous organizations are now embracing. 51.3% of respondents to Ovum's multi-market employee mobility survey 2014 said that their employer already provided access to mobile productivity apps through an enterprise app store or portal. Whether providing for corporate or personally-owned devices, it is apparent that businesses are starting to look at mobile apps to improve working practices.

Enterprise app store uptake



Source: Ovum Employee Mobility Survey 2014, N=4,708

One trend that we have viewed among some organizations is that they are trying to find one or two "Hero" apps that everyone can use and which gain recognition across the business. But Ovum's view is that this is a fairly limited approach: the real transformational power of mobility will be enabled when businesses deploy a whole range of apps across different parts of the business that improve individual processes. These more numerous apps – we'll call them "Soldier" apps for the purposes of this analogy – might not individually get the recognition that a hero app would, but overall they are the key to improving productivity across the whole organization.

Hero apps are a good starting point in terms of company culture, encouraging people to think about which processes could be mobilized. But they are only the start of the process: the successful deployment of one or two apps can start a virtuous circle where more line of business teams come up with ideas about which processes they want to see mobilized – and the more apps deployed, the more individual end users become engaged and view the IT department as an enabler of change. This speeds up the cycle of app development, getting to the point where individuals or teams can approach IT with a specific process that they want mobilizing and reasonably expect it to be enabled quickly – ideally resulting in an army of Soldier apps that are individually useful but also regimented and based on a common framework, meaning that they can work together. This end result could truly transform an organization's way of operating – but very few have reached such a level of maturity yet.

Key messages

- “Hero” apps can encourage recognition that mobile enterprise apps can make a difference to end users’ everyday lives, but it is the more numerous, specialist “Soldier” apps that ultimately transform the way an organization operates.
- A successful mobile enterprise app strategy is enabled by a virtuous circle: starting with small steps and deploying one or two apps, if done well, leads to increasing engagement among lines of business and end users and increasing requests for further apps to be deployed.
- Technology choices around analytics, standardization and interoperability are important – but transforming business processes with mobile apps is as much about a shift in company culture as it is about the software.
- Forward thinking organizations that have started to deploy Soldier apps to transform various business processes are already seeing the benefits to their bottom line.

Mobile enterprise apps: Heroes and Soldiers

Before going any further, it’s useful to outline exactly what we mean by Hero and Soldier apps, and provide some examples of what they might do. Hero and Soldier apps should of course co-exist to provide maximum benefit – there is room for both within any organization.

Hero apps

Hero apps get their name for a reason: they are, of course, highly useful and very popular. They serve a purpose that gains them widespread recognition across the business, and improves the working lives of employees in every department. They may be custom developed for the organization, but the horizontal, wide attraction of Hero apps means that they are also likely to be a commercial, publically available app sold through iTunes, Google Play or other app stores. Hero apps might improve processes such as:

- Employee expenses
- Transport including taxi bookings
- Canteen menus and orders
- Staffing timesheets
- Meeting room bookings
- File sync and sharing.

These types of process are a daily pain point for a lot of employees, and the point of a Hero app is simply to speed up that process and make it easier to complete – giving the worker more time to get on with their job. Custom Hero apps are likely to be more expensive to build and maintain than individual Soldier apps, while ‘off the shelf’ Hero apps will normally incur a per user fee.

Soldier apps

Soldier apps do not have the same widespread appeal or recognition as Hero apps, instead performing specific tasks within different teams. And where an organization may need only a few Hero apps, it requires an army – so to speak – of Soldier apps to transform every different process. To

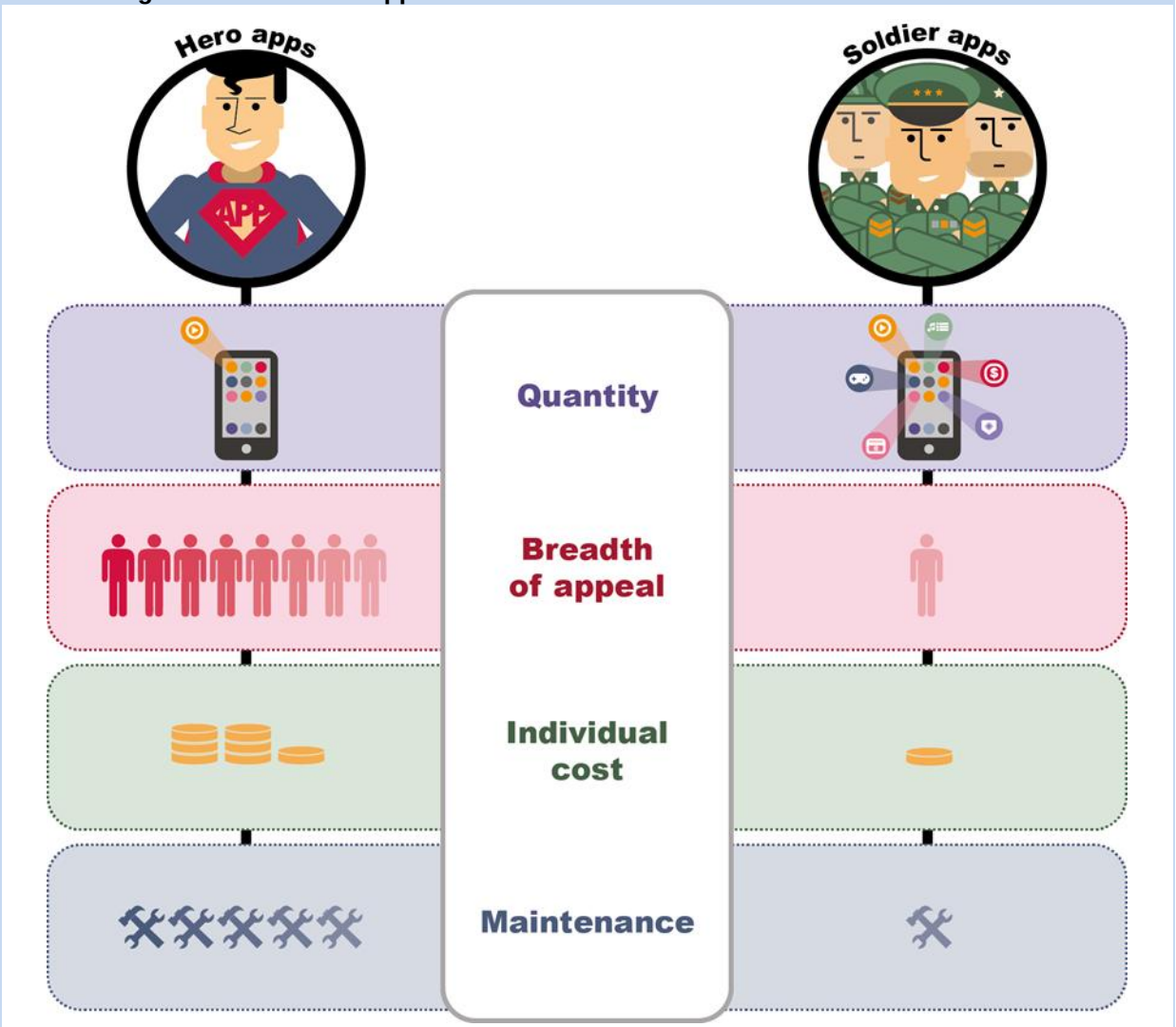
further the analogy, Soldier apps may have individual specialties but they also need to be standardized and interoperable, e.g. disciplined and capable of working together – like an army. Attempting to manage and secure a multitude of mobile apps running on different platforms and without any common architecture would be a nightmare for enterprise IT departments. Individual Soldier apps should be much cheaper to build and maintain than a Hero app, as they need to be able to be quickly modified and even retired or replaced if needs be without great cost in terms of time and resources.

Soldier apps should address the core tasks that individuals or teams perform every day, providing a powerful tool to make that team much more efficient while away from a larger screen and boosting productivity beyond what is capable with a general purpose Hero app or through simple mobile email. An army of Soldier apps is much more powerful than one or two Heroes.

Soldier apps must by nature be very specific to a team or process and are therefore more likely to be custom developed, because integration with back-end systems is normally a key requirement. It is primarily down to end users or line of business users to identify the apps that they need – no IT department can be expected to know every pain point in each line of business within their organization – so the scope of what they can cover is vast and limited only by the imagination. But examples of Soldier apps in action include:

- *In any sales department*: speeding up specific sales processes e.g. approval of discounts
- *In engineering / construction / utilities*: looking up blueprints or product information on appliances that require fixing
- *In media*: creating and publishing short videos, articles or memos
- *In healthcare*: using checklists for inventory and other processes, quickly booking appointments or patient transport.

Co-existing Hero and Soldier apps



Source: Ovum

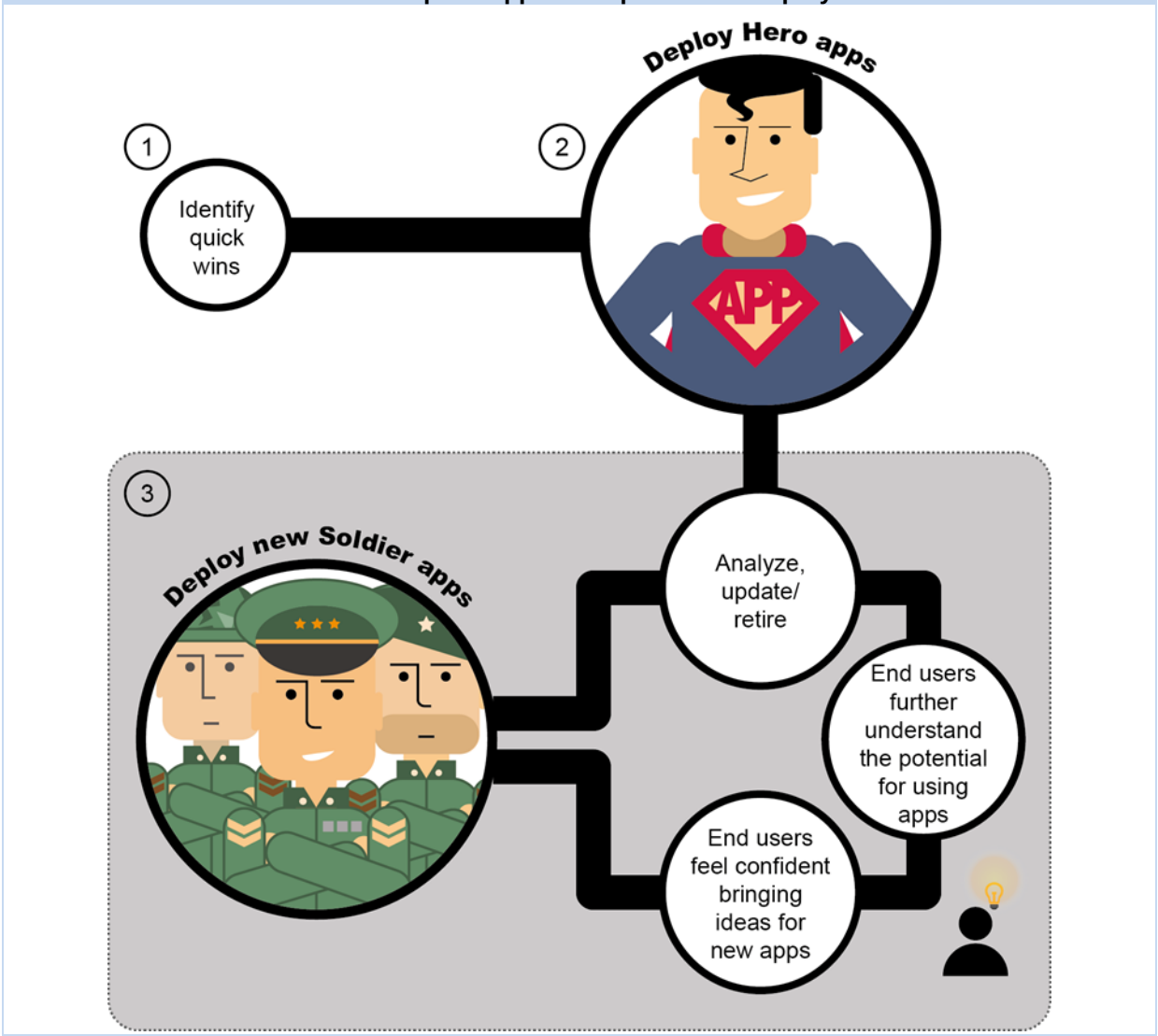
The virtuous circle of mobile enterprise app development and deployment

A successful mobile enterprise app strategy is as much about changing corporate culture, embracing the needs and pain points of individual end users, as it is about the technology required to build and / or deploy the apps themselves. The first small steps should identify the quick wins or low hanging fruit: obvious use cases that will benefit a lot of people across the organization. These first apps are likely to be Hero apps, but they should only be the beginning of the process, not the end: ideally, these Hero apps will kick start a virtuous circle where end users gradually learn the benefits of the use of mobile apps and communicate their needs to the IT department, which responds by deploying further specialist Soldier apps. As more apps are successfully deployed, the more accustomed end users will feel to identifying pain points in their everyday processes that they think could be helped with a mobile app – and so forth, until an army of apps has been deployed across the business, transforming processes in every department and at all levels.

The various steps in the concept are laid out in the checklist and figure below:

- Identify quick wins e.g. staffing forms, expenses, transport to and from campuses: aim to standardize simple processes that impact a lot of people.
- Take small steps: build out two or three Hero apps that address these quick wins and gain popularity across the business. These Hero apps are obviously useful and plant seeds in the mind of end users that mobile apps can help – their deployment should not be seen as “mission accomplished” but as merely the first step.
- Analyze usage of deployed apps to understand what works and what doesn’t e.g. who is using them, what for, when, for how long… And if an app is not being used, understanding why: whether it is down to a technical issue such as a bug, or if there is simply a lack of demand.
- As end users begin to appreciate the benefits of mobile apps, collect feedback as to which other processes could be improved: what can make the difference in their everyday lives?
- If employees can see that line of business leaders and IT are acting on their requests and building mobile apps to deal with specific needs, they are more likely to come forward with further ideas…
- …Which leads to an increasing number of apps deployed / processes mobilized and encourages an environment where employees are not afraid to ask and IT is not afraid to attempt to find a solution.

The virtuous circle of mobile enterprise app development and deployment



Source: Ovum

Of course, this process sounds simpler than it actually is to put into practice. Enterprise IT departments are likely to run into a number of challenges: on the technical side mainly in terms of finding, developing or deploying the right apps across the required operating systems, and then finding a way to analyze app usage to help understand how well they are working and whether they are generating any return on investment. And beyond the technical challenges, the whole concept hinges on tight alignment between lines of business and IT: IT needs to be willing to listen to business users to understand their needs, while end users and line of business users need to identify those pain points and have both the inclination and the mechanism to communicate them to IT. As such, successful mobile strategies are likely to not just be the brainchild of the CIO – they need complete buy-in and leadership from the board level, business leaders and end users in every department.

Technology choices and culture change must go hand in hand

The ideal scenario outlined so far, with organizations deploying a wide range of Soldier apps that help to transform processes across the business, is not something that we yet see in practice very often. The majority of businesses that we speak to are still in the relatively early stages of implementing a mobility strategy, looking at how to provide secure email, file sharing, and perhaps one or two apps. Those organizations that have already got somewhere close to this level of mobile maturity are extremely few. What is most important to realize is that mobility provides the opportunity to fundamentally change the way we do business, as much perhaps as the rise of the internet did. But in order to do so, technology choices must go hand in hand with a shift in corporate culture to one in which enterprise IT is – and is viewed as – an enabler rather than a protector or another layer of bureaucracy; where new ideas are quickly acted on; and where quick failure is embraced.

Technology: custom development vs. off the shelf

The first choice to make around mobile enterprise apps is whether a new app altogether needs to be deployed, or if it is simply a case of mobilizing an existing legacy application. Providing a mobile version of an application designed for a PC can be fraught with challenges, not least around the user experience (UX) – but these are obvious places to start in terms of identifying processes that can be transformed through mobile. It might often be a case of buying a separate mobile version of that application, or designing a version with a mobile-specific user interface.

This leads to the next important choice: whether to deploy something that can be bought in a public app store, or whether it is necessary to have one custom developed. While the meteoric rise of the app store concept has been driven by consumer apps, there is an ever growing array of productivity apps easily available through the various commercial apps stores such as Apple iTunes, Google Play or Windows Marketplace. An easy rule of thumb is that, where apps are available off the shelf, it makes sense to deploy those rather than build one from scratch. In the majority of cases that would be the cheaper option, and commercially available apps are likely to perform well. Given their need to appeal to a wide audience, they are prime candidates for the role of Hero app.

It is unlikely that Soldier apps could be found in a public app store, so custom app development comes into play when differentiation is required: when there is a specific task or process that needs to be mobilized and there is no off the shelf option that exactly fits the purpose. This is especially useful when an app is required for a new process not already met by any existing system, when mobility allows for a completely new way of doing business. Custom development is normally a more expensive option, however, and many businesses are put off by the potential cost of needing to develop separate native apps for each mobile OS used within the organization.

Technology: taking a platform approach to custom development

The advance of HTML5 / web apps, hybrid apps and mobile app development platform (MADP) vendors that offer a “build once, deploy everywhere” approach is starting to address the concern around cost of custom development, and also enabling businesses to develop and deploy apps in a very quick timeframe. And speed is key here – demand for apps is quick and growing, and interest is likely to be lost if it takes months to deploy something needed in a matter of weeks. Equally, if an app

does not work as it should – and that is always a possibility – it is better that it does so quickly without huge investment in time and money.

Using a single platform to build, deploy and manage the full lifecycle of a full range of Soldier apps enables IT to standardize processes (more on that shortly), and to build these cross-platform apps cheaply and reliably – certainly more so than building an individual native app for each required OS. A platform also enables developers to combine native device features such as sensors, accelerometers and location with external services, allowing for highly specific and customized apps.

Technology: the requirement for analytics

Understanding if an app is being adopted and used as expected is absolutely key to any mobility strategy: it is what will determine if there is any return on investment on the app, and govern not only how future apps are deployed but also what the budget behind them is likely to be. If an app can be demonstrated to be a success then it naturally increases the chances of further apps being deployed. And if an app is failing then it is important to understand why, and quickly either apply fixes or pull the project.

This process or backing winners and cutting failures can only be achieved if analytics are built into the platform that an enterprise is using to deploy its apps. Those in charge of the deployment must not simply offer an app to users and then forget it, moving on to the next project – they should be able to view how many people are using the app, what for, for how long, at what time of day, etc., as well as key performance metrics specifically relevant to that app. This will give a realistic idea of whether the app is a success or failure, and feed into the learning process around building the next app. This is also linked to the idea of the virtuous circle: the more apps deployed, and the more analytics applied to their usage, the easier it should become to deploy new Soldier apps.

Technology: security, standardization and interoperability

If an organization is looking at developing a range of new apps, it's important that they are both secure and manageable – meaning some kind of standardization is necessary – and also that they interoperate with each other as well as existing systems. Businesses have already made big investments in enterprise applications, and they are of course very unlikely to abandon these.

Providing a standard way for end users to access the apps they need – often through an enterprise app store – also helps to encourage adoption. So taken altogether, it is likely that the easiest approach for most organizations will be to find a single solution that enables them to develop (or discover) and deploy all of their apps, or at least provide an easy management link between them all. This platform approach offers the path of least resistance: the alternative is a proliferation of unmanaged, unsecured apps with no relation to each other, no standard interaction with back-end systems, built on different architectures and running on different OSs. The onset of consumerization and Shadow IT means that this is a potential scenario anyway if IT does not act to promote and manage apps centrally, as end users and line of business owners find their own ways of dealing with the issues that they feel IT is not addressing.

Culture changes: enabling process transformation

Mobile enterprise apps offer the potential to transform any number of business processes, but actually identifying those processes is a job that is impossible for any one individual or team to do. To a certain extent, making the most of mobility means a democratization of the decision making process.

IT leaders cannot be expected to understand the daily processes and pain points of every employee in their organization, so there must be structures in place to allow individuals and line of business leaders to identify what they are struggling with or what could be improved, and for IT to act upon. This clear communication and tight alignment between enterprise IT and lines of business is unfortunately not something that has been particularly common – all too often the IT department acts as (or is at least viewed as) a barrier to rather than an enabler of innovation, trying to strictly govern all tools and systems.

The first step in enabling process transformation is for business users to think in terms of "what" rather than "how": work out what they would want in an ideal situation, before even considering the practicalities around what is possible or what the challenges or risks are in pursuing that course of action. This allows for some out of the box thinking and idea generation, with the most realistic or easily implemented ideas tested out in practice first. This emphasizes the importance of a strong link between IT and lines of business, as those ideas need to be communicated in the first place, acted on by IT, and the resultant app evaluated by the business users. Such trust and interaction may take some time to build up, but it is vital in order for a mobility strategy to succeed.

Culture changes: embracing (quick) failure

Too often, fear of failure holds businesses back from taking steps that could make a real improvement to the way that they operate. But building out mobile enterprise apps on a large scale is always going to involve risks, and it is inevitable that some apps will not succeed as planned or expected. Whether it is down to a technical bug or a simple lack of demand or acceptance from end users, this is not always easy to spot.

It is vital to understand therefore that occasional failure is part and parcel of an enterprise mobile app strategy, and should be embraced rather than feared. If the right analytics tools are in place, working out what went wrong actually provides a good learning experience and enables developers and strategists to learn from mistakes, applying that education to the next app that is deployed. Of course, this is no excuse for prolonged or systemic failure: the idea behind Soldier Apps is that if a project is failing, it should be possible to quickly identify that and make an equally quick decision to either apply a fix, or drop the project altogether before too much time and resource is wasted.

Of course, this acceptance and even encouragement of fast failure can only be possible if development and deployment costs are minimal. And again, using a single platform approach to discover, develop and deploy apps is likely to be the easiest way of keeping those costs down.

Culture changes: don't expect too much from a single app

It is also important to set expectations within the business about what a single app can offer. Apps have become so popular in the consumer space precisely because of their simplicity and specific focus – they perform one or two tasks very well, and do not require lessons in order to use. These expectations around UX and simplicity of functionality follow us into the workplace, so enterprise apps need to have similar consumer-grade UX and simplicity.

In practice, this means not expecting too much from a single app, or requiring that too many functions are built into it – that kind of thinking is a legacy of enterprise applications built for larger form factor PCs, which can handle high levels of detail and hundreds of separate functions. In the mobile space, the more functions an app has, the more likely it is to become over-complicated and provide a poor experience – which of course has a negative impact on its adoption and usage. If a mobile app is

performing well and doing what it was originally designed for, it is best to leave it more or less in its original state. If further functions are required, the answer is simple: build another app.

Case studies: soldier apps at work

Westpac NZ

The pain points

Westpac NZ is the New Zealand based subsidiary of the Westpac Banking Group. It is one of New Zealand's four major banks, with around 1.2 million customers, 5,000 staff and 200 branches. Westpac has been looking for ways to improve digital interactions for its customers, partners and employees with the overall goal of providing a better, more responsive and personalized customer service. The bank's overall digital strategy encompasses B2C, B2B and B2E (business to employee) interactions, and mobile is a very big part of that – Westpac recognizes that the first point of contact between the bank and its stakeholders is going to be increasingly through mobile devices.

On the customer facing side, the primary pain point was that there were too many apps for customers to use and this was leading to some confusion. There were nine apps in the public app stores, all performing different functions (e.g. one for balance checking, another for transfers) and not all necessarily joined up and informing each other in real time.

Internally, Westpac felt that processes for dealing with incoming customer enquiries were not quick or personalized enough. Call center and branch staff did not always have detailed information to hand about the customer, and customers were also calling in for basic services such as checking account balances that could very easily be met through a mobile app and save time for operators to spend on more detailed, advisory calls with customers.

The Hero app

Westpac has developed a digital platform that can perform 90-95% of the banking functions that a customer might be able to get from a visit to a branch. Scheduled for launch in Q1 2015, this platform has been developed using Mobile First design principles. So it is optimized for mobile devices across all platforms and essentially acts as a single app that replaces and adds to the existing nine customer facing apps in the public app stores.

While this Hero app is customer-facing, the integration layer built into the digital platform means that it easily links back-end systems and helps to provide a single source of truth about customer data that is essential for deploying a range of employee- and customer-facing Soldier apps.

The Soldier apps

One Soldier app that is already proving successful was developed for the 400 independent mortgage advisors that Westpac works with in New Zealand. This app, designed for a completely open BYOD environment and therefore available across every mobile OS, essentially speeds up the process for mortgage applications and approval. It allows customers to fill in certain details in advance (and linking the app to the bank's back-end systems means that a lot of the required information is filled in automatically), and then the mortgage advisor can run through the partially pre-populated loan application with the client, adding deeper detail and agreeing borrowing and repayment limits. Again, the app is linked to the Westpac lending system – so upon submission of an application, the customer can get an approval or rejection within 60 seconds. Using this app allows mortgage advisors to spend

more time providing advice to individual customers, which is time better spent than repetitively filling in basic details. It is also allowing advisers to see more customers per day, making them more efficient.

Westpac is also introducing a range of Soldier apps that will help staff to provide a better customer service as part of its “next best conversation” strategy, addressing the particular pain point of not having sufficient data in front of them about a particular customer when that customer gets in touch with a query or complaint. The bank has around 10 million inbound requests each year, and previously had no insight into what those customers are going to ask. Now staff in call centers have an application tied into their CRM system that provides instant information on the customer, to help them direct the conversation: they can make recommendations based on knowledge of the full set of services that the customer is already making use of. A similar application is also provided on iPads used by staff in branches. Again, these apps help to provide a more efficient, personalized customer service, and reduce time spent on basic enquiries either through the call center or in person at a branch.

Changing corporate culture: finding a link between lines of business and IT

Westpac has a dedicated Digital team that provides a link between line of business and its IT department. This team has been promoted throughout the business and as a result is highly visible – and most importantly, it is approachable. The team aims to take ideas from non-tech savvy staff and feed them to the development team, and vice versa – creating an inclusive environment where staff can provide input without feeling that, as non-IT experts, they don’t have merit. This move to change the technology culture across the business is vital in identifying pain points and continuing the virtuous cycle of mobile app development, and will facilitate the deployment of further useful Soldier apps.

New South Wales Food Authority (NSWFA)

The pain point

NSWFA is the state government agency responsible for food safety in New South Wales, Australia, monitoring the food chain from primary production through to the point of sale. On an annual basis it conducts around 12,000 audits and inspections, and deals with more than 2,000 complaints from the public. It employs around 50 dedicated inspectors, and its primary pain point has been getting those inspectors out of the office and spending more time in the field with customers and stakeholders.

During an inspection, audit or complaint investigation, and depending on the size and type of business, an inspector may have to look up and fill out multiple forms that feed off up to 300 checklists. Before the mobile app rollout, this meant filling out forms on paper, giving customers a hand-written version of the initial report, and only entering the information into the central IT repository when back in the office – sometimes there would be a delay of two weeks between an inspection and a write-up. The time spent doing these write ups meant that field workers would spend an average of two days per week in the office. NSWFA were looking for a way to do things more efficiently, and to present a more professional approach to customers.

The Hero app

For NSWFA, the Hero app concept has not widely taken off – if anything, the one app that has made everyone’s life easier is simple mobile email. Inspectors are also using a mobile device management (MDM) client to secure their devices and provide easier access to shared files.

The Soldier apps

NSWFA has made a real difference to the working practices of its field workers by mobilizing its complete range of forms and checklists, using many custom-built mobile apps. Inspectors can also make use of a scheduling app to help plan their day, providing information on and directing them to their next customer.

Inspectors are provided with iPads, which have replaced paper for most functions, and an app to access the multiple forms needed for audits and inspections. They can also look up the inspection history at any particular site, easily flagging up previous concerns or points for improvement. These digital forms and checklists allow for quick, easy and standardized completion, and are saved instantly to the back-end repository (or, if no connection is available, they pend on the device and sync as soon as connected). The app allows inspectors to upload supporting evidence such as photos and other information on the business. The app also allows the inspector to provide an immediate, conclusive report upon completion of the audit / inspection: the forms automatically summarize the main issues and calculate whether a business' standards are deemed acceptable, marginal, or unacceptable. The business owner can then choose to digitally sign the report or not, and the report is instantly emailed to them – there is no more need for handwritten reports or a two week delay between inspection and report completion, instead it is all done on the spot.

Complaint investigations throw out slightly different challenges to inspections or audits, in that an inspector generally arrives at a site with little previous information and then needs to work out what to do. Again, the mobilized forms make life a lot easier for the inspectors in this situation: they have instant access to all the legislative rules and processes they might possibly need.

Some tasks still require inspectors to come back in to the office, for instance in cases of extreme non-compliance where penalties need to be issued and approval from managers is needed. However, the Soldier apps have been a huge success in terms of addressing NSWFA's primary pain point. Inspectors now only spend an average of between a half or one day in the office per week, as opposed to two previously. This extra time in the field allows them to complete more inspections and audits (a service that NSWFA charges for). Prior to the rollout the agency completed around 300 audits per month, it now does upwards of 420 – an increase of 40%. Inspectors also spend longer with individual customers providing feedback and education. Overall, processes are much more efficient, and customer service is noticeably better and more professional.

Micromed / Santa Catarina state

The pain point

Micromed is a Brazilian software firm that provides hospital management solutions. It is working in partnership with the government of Santa Catarina state in Brazil on a pilot scheme that aims to transform the way that information is stored and used in 15 hospitals across the state. The primary pain point that the program aims to address is the highly bureaucratic, paper-heavy nature of the health service: some patient records can cover 25 sides of A4, and there is an obvious difficulty for doctors and nurses in terms of quickly getting hold of the relevant patient information as they make their rounds.

The Hero app

The first app that Micromed is trialing is aimed at simply making patient records far more accessible to health staff. Instead of needing to find and search through all that paper, and then laboriously

updating those paper records, the information is provided in an easily navigable format on tablets and smartphones. Built as a hybrid app, it currently runs on iOS and Android devices. It allows for automated data input across teams and hospitals, and for healthcare workers to search for individual patients and then easily find the information they need about them – for instance which drugs have already been administered – through a familiar interface. This provides obvious benefits in terms of the number of patients that doctors and nurses can see, as they spend less time searching for and updating information and more time to perform their key roles.

The pilot program is currently in place, with the app being trialed by six doctors and twenty nurses across two hospitals. If the trial is successful as expected, the app will gradually be rolled out across the state healthcare system, potentially to around 6,370 healthcare workers.

The Soldier apps

Following this Hero app, Micromed has identified 33 further apps that it will aim to deploy for Santa Catarina state. Some of these might be as useful for all doctors and nurses as the patient record Hero app – for example a secure file storage and sharing facility for vital documents such as x-rays and ultrasounds – while others meet more specific needs such as theatre scheduling and allowing administrators to deal with some of the organizational pain points they have around the scale of paperwork they face.

Appendix

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Methodology

This paper has been commissioned by BlinkMobile and independently authored by Ovum. It is based on findings and observations from Ovum's wide-ranging research around enterprise mobility. The recommendations in this paper are informed by primary survey data and continuous conversations with end users and IT decision makers in organizations across multiple geographies and industries, as well as with vendors in the market.

The organizations that provided case studies for inclusion in this paper are customers of BlinkMobile, which facilitated independent interviews with the author. Ovum always maintains editorial control over all published work.

Ovum Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

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