INDUSTRY DEVELOPMENTS AND MODELS

Mobile: Consulting and Integration Opportunities and Key Players in Asia/Pacific

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IDC OPINION

In the current context of business transformation, one crucial aspect for businesses is to innovate in order to stay relevant, and for doing so, mobility is crucial. This is in two aspects:

- From an internal business process point of view, mobility can enable an enterprise to be more agile, customer-centric, and operationally efficient. It is here where discussions on virtual desktop infrastructure (VDI), mobile device management (MDM), and bring your own device (BYOD) become relevant at the core. Also important is mobilization of back-end applications that are operational (such as sales tools) and HR-related (such as recruitment, payroll, and claims).

- From external customer-facing world, when a business is mobilized, it has a much higher level of "touch" with its customers, and therefore its brand position in the market is elevated. This also brings into picture the context of "omnichannel" (i.e., delivering ubiquitous yet consistent customer experience). In such discussions, core is the mobile enablement of customer-facing processes via mobile applications. Examples of these are peer to peer (P2P) transfer in context of mobile banking and support operations in terms of utility companies.

However, either of the paths mentioned earlier fails to meet the desired business objectives if not carefully planned, assessed, executed, and managed — all this with buy-in from lines of business (LOBs), whose processes are being mobilized. As such mobility is a core aspect of enabling business-aligned IT, and therefore, addressing mobility for the sake of mobility should be discouraged.

IDC believes mobility solutions are changing the engagement models between employees, consumers, and partners. As a result, the traditional business models can no longer be thought to be separate, rather as one extended ecosystem. Furthermore, IDC highlights that in order to have a more realistic evaluation of the impact of mobility, businesses need to realize that mobility while has benefits in itself, but when tied to cloud (from a delivery perspective), social (from an engagement perspective), and analytics (from an intelligence perspective), the benefits are exponential.

As such, this brings the industry to the next level of transformation (i.e., the "Internet of things [IoT]", which is the basis of "the intelligent economy" — enabled by cloud, integrated by mobility, collaborated by social, and made intelligent by analytics).
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IN THIS STUDY

Methodology

This study reflects IDC’s views on the state of consulting and integration (C&I) services for mobility in the Asia/Pacific region and its future. For this assessment, IDC conducted its Asia/Pacific C-Suite Barometer (May 2013) and Asia/Pacific Continuum Study (May 2013) and interviewed key regional players.

In addition, IDC chose to speak to four categories of players in the enterprise mobility space:

- Consulting major — Accenture
- Large IT vendor with significant services business — HP
- Software major — SAP
- Pure-play systems integrator — HCL

While this study is in no way a direct comparison of one vendor to another, it reflects key observations in selected vendors capabilities and their strategies to offer enterprise mobility services.

All revenue figures are IDC estimates of professional services associated with enterprise mobility. Professional services cover revenue from both IT and business consulting. Also included in this study is the professional services revenue from systems integration activities and custom application development carried out in enterprise mobility space. These estimates were modeled based on primary and secondary research.

Note: All numbers in this document may not be exact due to rounding.

SITUATION OVERVIEW

Mobility deployments are a part of every CIO’s wish list. With the count of ongoing proof of concept (POC) currently undertaken in Asia/Pacific (excluding Japan) or APEJ, the forthcoming years will experience a large scale of mobility deployments. To date, applications extended to mobile were restricted to email and calendar. However, there is a transition period where more and more enterprises are now extending their business applications to the mobile environment.
In IDC’s conversation with mobility vendors, IDC observed that there was an increased demand for mobile applications in B2C scenarios. Consumers today want to be able to engage with their service providers (be it a bank, utility, or telecom company) and want to do so based on their most convenient time, place, and mode of interaction. As a result, enterprise CIOs have to think beyond their traditional enterprise IT and build applications for their employees and customers that require them to translate consumer behavior into the context of corporate functions. For most CIOs and LOBs, mobility is the transformation channel that changes the way they engage with consumers, businesses, and employees across multiple touch points.

Until recently, most enterprise applications implemented were mainly for optimizing the business and constituted for about 60–80% of the total IT spend for any organization. Here, the focus had been mainly for back-end enterprise applications, which may be termed as systems of records.

However, the demand today is to build sustainable competitive differentiation and as part of that, the focus has moved from managing the "application spaghetti" to enabling a more holistic and rewarding experience for both internal business users and the consumer or customers of respective businesses. With the availability of mobility as a platform and the ease of developing mobile applications, for the first time, IT is in a position to truly have an impact on business engagements — with customers, partners, and internal departments.

IDC believes as this transition in approach to IT and the ability of IT to influence business occurs, there will be a significant shift in the share of wallet with an increased level of emphasis on mobility, cloud, social, and analytics.

Figure 1 represents the shift in IT spending comparing it with the current and the future spend patterns.
The crux of doing business in an increasingly competitive environment is to be able to stay connected to customers, gather feedback and effectively improvise products and solutions, and remain relevant to customers. LOBs today want all or part of their applications to have a mobile component that will offer real-time solutions. Stemming from this is the desire to have solutions that will increase customer centricity and enhance the ease of doing business. When implemented with a foresight and with a strong business case, mobility solutions can help increase the efficiency levels and productivity while driving customer satisfaction. The mobility transformation will make for a change in the IT business model, where enterprises will have to carefully evaluate the mobile solutions available and choose one that suits their business needs the best. The ability to choose the right mobility solution that addresses the business case will determine the success of the mobility initiatives in the longer term.

As per IDC’s Asia/Pacific C-Suite Barometer (May 2013), mobility deployments were the top priority for enterprises across Asia/Pacific. Security, which remains integral to mobility deployments as well as software applications particularly software as a service (SaaS), will also drive most of the technological spending in Asia/Pacific. The direct correlation between these two categories with mobility indicates the sheer impact that mobility can bring to enterprises.

Figure 2 represents the top 3 technology spend categories in 2013 for enterprises across APEJ.
Security will be a major challenge for both enterprises and the service providers. With mobility, there is a lingering security threat to both the devices and the applications — the kinds that are unheard of in the cases of desktop or web-based applications. Every country has strong data privacy laws and enterprises are required to comply with these laws. Mobile devices are more likely to be lost or stolen, opening a range of data privacy violations; so, service providers have to ensure that security is embedded at every layer in the mobile architecture.

Based on discussions undertaken by IDC as part of this study, there are two types of CIOs. First are the CIOs who have undertaken mobility — either by deploying new mobile applications or extending mobile capabilities to existing applications, but without significant thought on how it affects businesses. The second are those that are waiting to adopt mobility because they are yet to figure out the business gain that is there to be achieved. As such, there are very few who have adopted mobility and have achieved the desired business objectives thereof.

This brings us to the discussion as to what defines the mobility landscape.
From a solution perspective, mobility ranges from deployment of desktop virtualization or VDI, BYOD to include elements such as MDM, and then extends to the mobile application environment (such as customer relationship management [CRM], enterprise resource planning [ERP], and supply chain management [SCM]), and furthermore to the reconstruction of business processes and significant people and change management engagements. All these can be addressed by multiple aspects.

**FIGURE 3**

The Mobility Solutions Ecosystem

As shown in Figure 3, there are many moving parts in the industry, with players ranging from device manufacturers, applications vendors, security management, and middleware players to professional services and systems integrators — all vying for leadership in an industry that is at the cusp of change. This has strong implications for enterprises, and CIOs need to have an effective mobility strategy. It is pivotal that they pick a partner or service provider that has a strong end-to-end ecosystem with a holistic approach to achieve their goals. Enterprise mobility could potentially be an enormous undertaking and prove transformational for the organization. A reactionary approach to engaging with multiple vendors of the ecosystem value chain may not be the most realistic or efficient.
**Current Industry Dynamics**

IDC views the enterprise mobility solutions ecosystem to be split into two distinct groups: horizontal and vertical solutions. Horizontal solutions are internal to any organization and range from VDI, BYOD, and MDM. Most of these solutions are from the perspective of enabling the internal workforce (be it sales or customer support) for engaging with the customer organization or being efficient on the field. On the other hand, vertical solutions are industry-specific and aim at establishing an effective business process with results expected to directly have an impact on the business process.

Figure 4 shows that in order to drive high level of business impact from implementation of mobility solutions, the level of involvement from LOB has to be quite significant.

**FIGURE 4**

Influence of Line of Business

Therefore, to really get the value from mobility, the business has to truly understand how mobility can change existing business processes and tangible benefits it can bring not only from a cost or customer interactions perspective, but more on how it...
can help build a competitive advantage that can offer the business an upper hand in the market.

However, this is not completely onus of the CIOs rather the responsibility shifts more onto LOBs as they are directly affected by the outcomes. Therefore, it is critical that LOBs are able to comprehend the extent of benefits and level of change required to the status quo before they embrace mobility as a solution area.

**Horizontal Mobility Solutions**

Horizontal mobility solutions are solutions developed with an intention to mobilize the workforce internally, thereby looking at cost and productivity-related benefits from mobility deployments. This could begin by mobile-enabling few applications to a section of employees and, with time, extending it to all employees, and further mobile enablement of all applications as well as business processes. Such an environment maybe termed as controlled adoption of mobility in an enterprise environment for enabling the next-generation workforce.

However, there are uncontrolled aspects as well. Consumerization of IT has resulted in the rise of BYOD. While there is a tendency for CIOs to resist this, it is important to realize that this is in fact C-Suite-led trend and BYOD is here to stay. This has led to several conversations between CIOs and IT vendors on how to effectively enable BYOD, while ensuring security, application performance, and the broader enterprise application store. Yet, few organizations are taking advantage of BYOD as few have holistic policies across device support, procurement, contract management, service desk support, and mobility policies.

Mobility initiatives bring about the obvious shift in the systems of engagement. The center of gravity of IT has now shifted from desktop to users’ preferred devices ranging from mobile phones, laptops, and tablets. With a single employee having access to multiple devices, there is an expectation of having the same rich experience across these multiple touch points. The proliferation of these devices in the enterprise will also run a risk of opening the gates to a wide array of threats and security breaches. This will bring in additional complexities to the enterprises of managing these devices by having an overarching governance layer to monitor the usage of devices and data streams. All these factors together have compounded the need to have virtualization in the enterprise.

As such, the first step toward mobility is to adopt virtualization for endpoint devices, which will help manage the influx of devices as this will help enterprises optimize their mobile environment for security, access management, and adherence to policies as well as performance management while providing a degree of automation.

These solutions are mostly internal to an organization led by CIO aimed at increasing overall operational efficiencies. Enterprises can deploy hypervisors to devices that allow partitioning of operating systems to avoid any spillover of corporate data to personal and vice versa. Currently, though vendors offer management and security solutions for virtualization, it is essential that IT can also manage other device types through the solution, or that the solution can be integrated into other cross-platform management offerings.
**Vertical Mobility Solutions**

Asia/Pacific is a diverse market with different countries at different maturity levels in their perception of mobility. So, a single mobility solution for Asia/Pacific may not be the right way to address the needs of customers in the different countries in Asia/Pacific and all mobility solutions will require having a certain level of localization component to appeal to the buyers in any nation. Similarly, at the industry levels, the business case for mobility is so diverse and largely attributed to the scale of investment, number of users, understanding of mobility solutions, complexity of applications, as well as the recognition and emphasis on mobile applications.

From IDC's conversation with vendors, it is derived that banking and healthcare sectors (not necessarily in that order) experienced increased traction for mobility solutions. Here is a brief description of each industry-specific mobility solution:

- **Banking.** Currently, the focus in this sector is mainly on the consumer-facing business applications, which include mobile banking, mobile payments, and mobile wallet. The concerns around security and regulations have actually been an inhibitor for the uptake of mobility deployments in the internal operation and management departments of the banks.

- **Healthcare.** The few initial mobility deployments have been in the areas of electronic medical records in hospitals and telemetry for remote medical care and consumers using mobility apps to manage their health and wellness personally. In the healthcare sector, mobility is slowly evolving to be a customer engagement model where healthcare users, clinicians, payers, and providers interact with each other irrespective of the channel and their location. Currently, security and data privacy are inhibitors for large-scale mobility deployments in the hospitals.

- **Retail and consumer-packaged goods (CPG).** Mobility deployments in retail were focused on mobile commerce, marketing, point of sales, and mobile payments. However, with retailers' desire to grow customer loyalty, they are now implementing solutions for precision marketing and getting to know their customer better to help them serve better. Mobility helps them extend their reach by providing access to consumers on product information, reviews, and inventory. The focus is to create an omnichannel experience for the customer that unifies marketing, merchandising, and commerce.

- **Manufacturing.** In mature industries such as manufacturing where creating new stream of revenues can be challenging, mobility deployments help them cut down on costs while increasing efficiency. While the initial deployments were targeting at mobilizing the CRM applications, there is sufficient scope to mobilize supply chain management modules to have real-time updates about inventory and product details to help them make real-time decisions.
Utilities. Utilities, like the manufacturing sector, views mobility as a driver to reduce cost. Mobilizing the field service technicians and sales force automation are the primary areas for mobility deployments. These deployments are directed at effectively managing time, thereby reducing costs. There is also a focus on extending mobility for asset management. This includes plant maintenance, grid maintenance, and network analysis and management. Mobility also brings about new dimension to smart metering where consumers can use mobile devices purchase load through the utility office and then be able to monitor their consumption through mobile applications.

Professional Services

Given the demand for mobility solutions, there is an increase in professional services for mobility. The APEJ enterprise mobility market for professional services is expected to grow from US$673.2 million in 2012 to US$1,643.8 million in 2017 with a CAGR of 19.5% in 2012–2017. A major challenge with mobility deployments will be the successful integration to the back-end systems as well as the front-end applications. The systems integration market will experience the highest growth and is expected to grow at a CAGR of 19.3%.

### TABLE 1

**Asia/Pacific (Excluding Japan) Enterprise Mobility Professional Services, 2010–2017 (US$M)**

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<td>Business consulting</td>
<td>88.4</td>
<td>120.6</td>
<td>155.1</td>
<td>188.9</td>
<td>225.1</td>
<td>265.6</td>
<td>309.5</td>
<td>356.2</td>
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<td>IT consulting</td>
<td>37.8</td>
<td>54.3</td>
<td>73.9</td>
<td>94.9</td>
<td>118.4</td>
<td>144.7</td>
<td>173.7</td>
<td>206.6</td>
</tr>
<tr>
<td>Custom application development</td>
<td>62.1</td>
<td>87.2</td>
<td>116.7</td>
<td>147.6</td>
<td>181.0</td>
<td>215.6</td>
<td>252.0</td>
<td>290.4</td>
</tr>
<tr>
<td>Systems integration</td>
<td>179.6</td>
<td>248.7</td>
<td>327.5</td>
<td>406.4</td>
<td>490.8</td>
<td>582.5</td>
<td>681.5</td>
<td>790.6</td>
</tr>
<tr>
<td>Total</td>
<td>367.9</td>
<td>510.9</td>
<td>673.2</td>
<td>837.8</td>
<td>1,015.3</td>
<td>1,208.3</td>
<td>1,416.7</td>
<td>1,643.8</td>
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Source: IDC, June 2013
Mobility deployment will bring about a change in which IT and business operates and will effectively break the business process. Enterprises will engage in business consulting for their mobility deployments to understand the strategy element, solution aspects, and the user adaptability component that will accompany mobility deployment. Professional services for business consulting and IT consulting together are expected to grow from US$229.0 million in 2012 to US$562.8 million in 2017. It is recommended that enterprises engage with vendors that understand their business as well as have a deep understanding of the mobility solutions. In doing so, enterprises will need to understand how these mobility solutions will deliver value to the enterprises in terms of lowering their total cost of ownership (TCO) and the impact it will have on the key performance indicators (KPIs) of the CIO or LOB. A key factor that decides the viability of a mobility solution is the presence of the business case. Mobility deployment with a business case built on these aspects is sure to deliver more value to the enterprises. Even with small-scale mobility deployments, the business case validation is critical and should be aligned to the enterprises’ overall business strategy. In essence, with mobility deployment, there is a need for the organization to not just pick the right solution but also to manage the change brought about by mobility.

With myriads devices crawling into the enterprise, IT departments not only have the challenge of managing these devices but will also have to develop applications to suit each of these devices. Unlike traditional application development where the platforms and development languages were well established beforehand, mobile application development is continuously evolving and faces challenges of maintaining the same rich customer experience across the numerous devices and platforms available.

While the market is not short of readily available apps, enterprises will want a certain level of customization to reflect their brand and suit their specific needs. As a result, custom application developments for mobile solutions are expected to grow at a CAGR of 20.0% during the forecast period 2013–2017. Vendors today offer different platforms where enterprises can develop their own applications. These platforms support different development languages, frameworks, and tools. For enterprises, it is almost impossible to support all devices and platforms. Hence, it is critical that enterprises chose the device/OS they wish to support before heading with mobile application development. While doing so, CIOs want to be associated with best-of-breed systems integrators that not only develop their applications but also help to integrate applications across their broader enterprise.

With numerous platforms, the challenge for vendors is to manage the resources for the mobile application development. Here, it is recommended to have resources that are cross-platform-trained to develop and test mobile applications. Reusing of code and automated testing for these applications can help customers accelerate their speed to market. While testing mobile applications, it is necessary to carry out cross-platform testing, performance, and load testing, as well as validation of mobile integration to back-end systems. These applications, once developed, will have to be integrated with the front-end applications as well as the back-end systems, and in the longer term, they have to be integrated across the disparate enterprise portfolio.
This raises a concern on governance and development of policy framework because these mobile applications now have access to various data sources and are in the hands of non-office workers as well. As per IDC's Asia/Pacific C-Suite Barometer (May 2013), governance and policy framework architectures were high on the radar for CIOs.

**FIGURE 5**

Importance of Governance and Policy Framework and Management, 2013

![Pie chart showing importance levels of governance and policy framework](image)

Source: IDC’s Asia/Pacific C-Suite Barometer, May 2013
Mobile security has four key areas of concern:

- **Authentication and access.** Providing secure access to corporate data on a device that can be easily stolen or lost is a challenging task for enterprises. Hence, user and endpoint authentication play critical roles while planning mobile implementations to prevent unauthorized access to data, applications, and connectivity. While enforcing the authentication strategy, it is equally important to ensure that the authentication strategy maintains usability while being resilient to any attacks. Once the user/end device has been authenticated, it is equally critical that the identity can be safely used to control network access. Most commonly used authentication methods include credentials/passwords, biometrics, smart cards, tokens, and certificates.

- **Data in transit.** With mobility deployments, information critical to any enterprise are transmitted over the wireless networks. Data on transit is usually real-time valuable information and is transmitted over the private and public networks. While much emphasis is laid on securing the stored data, data on transit becomes a low-hanging fruit for the cybercriminals. And to prevent any kind of data theft, it is inevitable to align with a partner that can provide the right products that an organization demands.

- **Data at rest (on device).** Securing data at rest is not a new concept; however, with mobility, it becomes a challenging task to secure all of the devices that have access to the corporate network. The data on these devices are a soft target from a broad range of threats including malware, viruses, Trojans, and worms. A major challenge is to secure the mobile devices — protecting the enterprises and users from unauthorized access and data loss on lost or stolen devices. Hence, the mobile security strategy should aim to secure a wide array of devices on numerous platforms and also be able to locate, wipe, and lock the device when the device has been stolen or lost to prevent compromising of data.

- **Application security.** With mobility, it is not just about securing the device and the applications but security has to be embedded across every layer right from datacenter to the end-user device. Increased numbers of enterprises are now open to the idea of having a centralized app store where employees can browse through a catalog of apps specific to their organizations and download these on their device post-user authentication. Having an internal application store not just eases the complexities of managing upgrades to these applications but also brings about the much-needed governance layer. The central app store acts as an overarching governance layer where enterprises are able to monitor the applications and devices that are connected to the network.

Systems integrators have an added advantage of understanding the business as well as the software and hardware requirements for mobility deployments. Hence, they are better positioned to provide consulting and leverage their expertise in migrating and transforming the systems in the broader scope of the development. However, as enterprises cope with integration across their disparate enterprise portfolio, it is necessary that vendors continue to create alliances and build ecosystem to help solve the challenges.
Vendor Profiles

Accenture

Accenture is at the forefront of enabling businesses meet their business objectives via mobility. With its consulting inheritance well entrenched into Accenture's go-to-market (GTM) approach, the company's more than 2,500 mobility experts have been enabling its customers derive the desired value from mobility initiatives for over a decade. As part of its client engagement, Accenture really begins by asking the customers why they want to mobilize while trying to identify the real business need for it. Through its mobility consulting practice, Accenture can help clients realize whether or not mobility is the answer to the existing issue at hand for their businesses. This is done while keeping in mind that not all applications "can" be mobilized, or "need" to be mobilized. Following this, Accenture then evaluates the existing versus desired technology stack at the customer premise (across applications, software, and infrastructure) and then looks to build out a view that best suits the customer environment.

Accenture's software development services are often provided in combination of Accenture's Mobility Consulting engagement as part of a broad mobility strategy and planning effort. In addition, experts from Accenture help clients to evaluate different platforms, devices, and use cases to be implemented. This is further supported with testing and managed mobility platform services. It is of particular note that Accenture's managed-service platform helps clients to launch and scale vertical mobile offerings quickly on a variable and transaction model basis. This allows speedy deployment of POCs and rapid scale-up of POCs to production.

As such, Accenture itself is expanding its mobile strategy across multiple platforms to maximize footprint of its service delivery. Accenture's capability to provide end-to-end solutions as opposed to providing point solutions has helped the company gain increased relevance in the minds of their customers. While Accenture currently boasts of capabilities to provide end-to-end solutions for mobility, it does recognize that mobility as such is continuously evolving, and the company is pursuing partnerships and acquisitions to strengthen its product suite. This is in line with the fact that business models will evolve over time, which will call for partnerships and acquisitions and Accenture is well positioned to address this change.

Some examples of Accenture's engagements in the region include:

- **A Japanese bank.** Helped a joint venture with Japanese telcos and a bank, Japan's first mobile bank offering

- **A major teaching hospital in China.** Created an app that decreases average triage processing time and improves internal communications
A company in China. Developed a mobile payment service to support remote, card-based mobile payments in the short term, and near-field communication (NFC) mobile payments in the future.

Local government in Australia. Helped with ERP replacement that needed to incorporate access and scheduling for field employees.

Accenture Service Offerings

Accenture Mobility offerings are grouped in five main areas:

- **Mobility Consulting.** Accenture Mobility management and technology consulting services helps its clients develop mobility strategies, mobility business and technology plans, and design mobility solutions to drive additional enterprise and customer value.

- **Mobility Software Services.** These are mobile applications including custom, packaged and hosted client, client/server, and cloud-based solutions with support for all leading high-level operating systems (HLOS) and cloud platforms.

- **Mobility Software Services for devices and platforms.** Accenture Mobility provides a range of embedded software services for clients to best enable a product or device containing embedded software. These services are offered cross-platform, with support for all leading HLOS and cloud platforms.

- **Mobility Managed Services.** Accenture Mobility provides a managed-service platform for clients to launch and scale vertical mobile offerings quickly on a variable cost and transaction model basis. This platform also supports cross-border commerce and offers dramatic reduction in complexity through pre-integration with leading network operators, device manufacturers, business partners, and developers.

- **Mobility Enterprise Integration Services.** Accenture Mobility provides integrated business and technology mobility services through a vertical or functional domain. These services provide large-scale, integrated solutions utilizing the full complement of Accenture Mobility offerings to service the enterprise mobility needs of our clients.

Case Study

- **Client:** Telstra Australia

- **Business Objective:** Telstra's automated tools and related processes were not optimized to support efficient field work practices. Key challenges included unproductive and repetitive manual processes, poor accessibility of information, and low utilization of the field device.

  Based on Accenture's knowledge of the client's unique challenges and experience in enhancing field workforces across the globe, Telstra engaged with Accenture to deliver the Communications Technicians of the Future (CToF) program.
The Solution: Accenture worked with Telstra to define a program of work that focused on people, process, tools, and technology changes.

Telstra embarked on the CToF program to provide communication technicians (CT) with next-generation tools to better achieve their work. Accenture served as the prime systems integrator during Phases 1 and 2 of this program, with each phase containing a number of discrete projects.

CToF Phase 1 program delivered a number of projects focused on enhancing the CT van and computing environment such as standard (ruggedized) laptop build, being always connected, front-mount of laptop in the van, satellite navigation, and van power management.

CToF Phase 2 (the Telstra Technician Toolkit [TTT] project) delivered a software application replacing the Field Mobile Computing (FMC) application that resided on the CT's laptop computer and enhancing current and introducing new capabilities (i.e., line testing initiated from the TTT, integration of satellite navigation with ticket of work information, GIS integration, ticket of work history maintained on the device).

Business Benefits: The program contributed to a substantial improvement in field workforce productivity by delivering the following capabilities — always connected connection handling, emergency jobs push capability, sending and receiving messages with dispatchers using device, integration with GIS viewer for viewing cable network plans, integration with GPS for satellite navigation, capture of feedback via integrated feedback forms, and automated line testing, where required.

HCL

Known for its application development and systems integration capabilities, HCL is extending services from consulting, integration, and deployment of mobility. Its partnership with SAP has helped them to compete with other established players by being able to build capabilities and service its clients on the SAP mobile platform. Having boarded 20 partners, HCL is aggressively extending its mobility ecosystem to cater to its customer mobility requirements in consulting, application development, and testing across the different business models. Availability of resources that are trained in cross-platform development and testing helps HCL to develop POC's within shorter timeframes. The shorter duration for POC is definitely an advantage in Asia/Pacific where customers want to experience the solution before buying it. In addition, the agile development methodology adopted by HCL ensures that the mobility solutions are implemented on time and on budget, ensuring that the time to market is not hindered for its clients.

HCL’s Mobility Innovation centers of excellence (COEs) and mobility labs help HCL in its in-depth mobility-related research and let them keep pace with the changing trends in mobility. Given HCL's heritage of being a pure-play systems integrator, it is now expanding its mobility ecosystem to become a preferred partner of choice for its customers in the transformation journey of mobility. HCL leverages its expertise in custom application development to develop mobile solutions that fit the client's
requirements, and this is visible in the several mobility implementations HCL has carried out globally.

A few of HCL’s mobility offerings are as follows

- HCL’s technology architecture for mobile initiatives is classified under two categories:
  - Enterprise-driven (Enterprise Mobile Enablement and Mobile Field Force)
  - End-user-driven (Lifestyle Application)

The different layers of the architecture are: device, nonfunctional, business layer, and back-end system

- HCL’s Mobility Studio with over 70 accelerators is HCL’s own app store that encompasses various mobile app solutions

- Consulting, integration, development, and testing services across the mobility ecosystem

**Case Study**

- **Client:** A global professional services firm specializing in real estate and providing management and outsourcing services with a strong presence in Singapore (also has operations in 14 countries in the Asia/Pacific region)

- **Business Objective:** The client employs contractual field force personnel to market the properties from real estate developers to potential tenants and also to carry out inspection for tenancy confirmation in those buildings.

  Tenants used to manually visit the properties and usually would like to know about the tenancy information to strategize their positioning, thus increasing the time taken to close a tenancy deal. Moreover, these field force personnel used to manually confirm the tenancy and update the database with the tenant listings and details about their tenancy.

- **The Solution:** HCL developed an iOS mobile application to enable the client field force personnel to carry the tenancy information of these buildings with them and also provide them with features for tenancy confirmation–related activities. The app presents the floor plan of the registered buildings with tenant listing and occupancy so that the field force personnel could share the same with potential tenant and provide them with details such as building facilities, rental space, tenancy listing, and photos.

  The tenancy expiry information is offered in an easy-to-view, color-coded format along with the current pricing details and trends, thereby enabling the field force personnel to easily convince potential tenants. Ability to export the building floor plan to other staff was also made possible so that multiple locations can be rented out to a potential client in one shot.
**Business Benefits:** Response time will be cut by 60% as the field force personnel can inform the prospective tenants about the complete set of features, thereby ensuring 60–70% of work in the first meeting. With the mobile app, the prospective tenants were able to obtain up-to-date information about the building and plan their rental strategy efficiently.

The level-by-level floor plan enabled the field personnel to locate the tenants easily in the building, thereby reducing the cycle time and resulting in operational efficiencies. The field personnel were also able to confirm the tenancy at the sites quickly with lesser efforts, reducing the inspection time at a particular location.

**HP**

In the mobility arena, HP has emerged as a force to reckon with as an IT services major brings together its assets across hardware, software, and services to build an arsenal of formidable services. In discussions undertaken by IDC, HP was the only one to commit a timeframe of two weeks for deployment of POC for an end-to-end mobility solution, which includes mobile applications and integration with the back-end system, assuming the client has a clear definition of their user interface requirements. This prowess will place HP rather favorably at the CIO's office and, in many ways, mirrors HP's heritage in infrastructure services.

Therefore, for businesses that want to quickly test waters for mobility deployments, HP is ideally placed by having a quick response time that essentially reduces the POC cycle and guarantees shorter time to market for its customers. HP's core area of strength is its infrastructure stack, given its ability to link mobility initiatives to datacenter transformation will always play to its advantage.

In addition, HP appreciates the fact that mobility is a business issue and therefore, HP engages with stakeholders to understand the desired business value and ROI from mobile initiatives — which is addressed as part of HP's Mobile Opportunity Workshop. For clients that want to establish a global footprint, HP helps them to look at enterprise mobility holistically and consider leveraging a mobile enterprise application platform (MEAP) and integrating that with an enterprise mobility gateway solution (to connect mobile apps to back-end systems) and an MDM solution.

HP has a range of offerings to help its clients enable mobility. Few of these are:

- **HP Mobile Enterprise Solution Architecture Consulting.** This helps clients define the right mobile architecture to meet their business goals and select the mobile enterprise application platform components needed to deliver and manage the mobile environment. It also includes HP Enterprise Mobility Framework, HP Reference Architectures, and HP Converged Cloud.

- **HP Mobile Applications Services.** This helps in developing custom mobile apps. It also includes HP Enterprise Mobility Platform, HP Enterprise App Store, HP Enterprise Mobility Gateway, HP Anywhere Development Platform, HP Enyo java script framework, and the HP Unified Mobile Testing platform.
**HP Enterprise Security Services.** This includes HP Fortify for application threats, HP Tipping Point for network intrusion, and HP ArcSight for threat monitoring.

**SAP**

SAP is moving out of the traditional confines of a large ISV and has embraced cloud as well as mobility in an aggressive manner — which is highlighted in its acquisition spree, picking up Sybase and Sylo, and investing in partnerships with Mocana and Tangoe. SAP is embracing open standards such as OData; working closely with mobile development toolset vendors such as Sencha, Appcelerator, and Adobe Phonegap; and allowing developers to build apps using native IDEs, SAP SDKs as well as open-source projects. These acquisitions and partnerships not only strengthened the SAP stack, but its services business grew significantly as more and more clients asked for SAP’s involvement in major transitions. IDC views this demand from customer to go to SAP for professional services to be positive for the ISVs business. Being able to offer high-end consulting services that involve business-side discussions and great technology depth will position SAP stronger in the services space. However, SAP is rather clear that its service offerings from mobility today, with SAP delivering them either alone or in collaboration with partners, will slowly move to the partner ecosystem. This is largely because SAP wants to continue to build the same level of relationship with its partners on mobility offerings as it has on its traditional ERP stack.

Given the position, mobility enjoys in the market and in SAP’s focus, the services delivery capabilities have been ramped up significantly to address this. SAP realizes that that mobility brings about a change in both the IT and business process and therefore SAP’s approach is to first look at the business processes and design the “new” processes for the business should they decide to go mobile and map the same back to the desired ROI. Addressing this, SAP has developed the comprehensive TCO framework and benchmarking data for mobility to help its clients assess, plan, evaluate, and implement the right mobility solution.

Following this model, SAP gains a better understanding of the customers’ business needs and provides strategic guidance to its clients to align “mobile” to their overall business strategy. Through its Mobility Design Center, SAP is able not just to extend the current applications to mobile but also develop new business critical apps that fit the client’s requirements.

SAP realizes that mobility is a direct channel for the customer to understand the consumer and makes an earnest effort to deliver enterprise apps with consumer-grade experience. In addition, SAP’s rapid deployment solutions for mobility enable enterprises to quickly adopt mobile solutions.

The company has been working to enable and ramp up its partners to build and develop applications on SAP platform. Being an ERP company, the C&I capabilities around ERP are part of SAP’s DNA and fully weaved into their focus on co-innovation with its customers.

SAP Services has designed and implemented SAP Mobile Solutions for both core mobile users in the field and business users who want access anytime, thus
extending business processes to any device — anytime, anywhere — even in disconnected mode. Examples of SAP Services' mobility solutions implementation in Asia/Pacific includes:

- For banks — implementing the multichannel banking solution across mobile and Internet channels for both retail and corporate banking businesses. Mobile wallet solutions are also being launched in fast-growing markets to target unbanked/underbanked segments.

- For logistics, oil and gas, and transport operators — deployment of mobile CRM and asset management solutions to improve customer service and asset maintenance processes to improve operational efficiencies and get more value from their existing investments in resources.

- For consumer-packaged goods — retail execution solutions that sales representatives can use to boost productivity, improve sales effectiveness in the retail channel, and provide marketing and sales management with critical insights into field execution.

- For cross-industry — productivity applications to LOB users (HR, finance, procurement, etc.) to improve employee productivity and insight and unlocking the value from customer’s investments in SAP’s core applications.

While SAP is establishing the necessary mobility ecosystem to provide end-to-end mobile solutions, a few of its offerings are listed as follows:

- Mobile Innovation Program — a process by which SAP and SAP Services collaboratively engage with customers to drive mobility innovation by identifying impactful mobile use cases, prototyping applications, and creating an execution plan rapidly during active sales cycle. This program helps SAP focus on business discussions and outcomes that drive mobility transformation.

- SAP’s Mobility Design Centre — a one-stop shop to conceptualize, design, develop, validate, and maintain customer-specific mobile enterprise solutions. A team of user experience (UX) designers, architects, and developers works collaboratively with customers to create mission-critical solutions that are feature-rich and powerful yet provide elegant, intuitive, and secure handling across a variety of device platforms.

- Rapid Deployment Solutions — with an integrated delivery approach designed to fix the scope, contain the costs, and streamline schedules for implementation, SAP Services’ teams help customers quickly and affordably deploy SAP solutions for specific business requirements at a low service-to-software ratio.

- Mobile Strategy Services — discovery and planning services to identify use cases, business value potential, and define a framework and architecture to drive mobility adaption in an enterprise.

- SAP enterprise mobility management solutions — include mobile content management, enterprise app store, MDM, and mobile application management.
FUTURE OUTLOOK

Technology Assessment

Of the many inhibitors for mobility, the ones that shout out the loudest are the concerns on security, proliferation of a myriad of devices along with the challenges of managing them, and the high prices prohibiting the widespread adoption of mobility solutions. Those that are ready to take the plunge and are building out their internal policies and governance frameworks are sure to realize that the rewards outweigh the risks. Here, it is important to note that high security might render the mobility deployments to be ineffective squeezing out the benefits of mobility solutions.

Vendors play a major role here to ensure that the mobile architecture deployed and applications thereof are compliant, flexible, and scalable and to make it more secure, reliable, and resilient to any possible attacks — all these whilst ensuring the end-user experience at the chosen end-device is not hampered.

Not very often do we come across technologies that reshape the business model. Today, mobility is at a juncture where "cloud" was a couple of years back (e.g., security concerns, need for business case). Similar to cloud, mobility solutions also offer a new channel for service delivery, and therefore, combining cloud and mobility will result in a comprehensive delivery platform for any business — be it internally or externally focused.

Mobility solutions are not new entrants to the market but they have evolved with time. What we have today is mobility solutions that have greater computing power, providing real-time access by having back-end integration and appealing front ends that offer greater ease of accessibility and flexibility. These solutions are aligned to the evolving ICT ecosystem tapping into the faster broadband speeds and back-end systems that have faster computing speeds transforming the business process.

The launch of new devices and technology every fortnight has kept the vendors on their toes, testing for their ability to quickly adapt to these as well as their speed to market. Enterprises that are not able to keep pace with this mobility transformation are running the risk of facing a direct impact on their brand with direct implications of losing its customer base. As a result, the ability of a company to implement and integrate these new technologies into their application environment enhances not only their capability to address their customers but also their brand image at large.
ESSENTIAL GUIDANCE

Mobility solutions have transformed the business-to-business (B2B), business-to-consumer (B2C), and business-to-employee (B2E) models. Mobility businesses today want to have consumer-like services and IDC sees this as a permanent shift going forward. Of course, certain caveats especially those concerning security need to be addressed. There is a need to understand that this shift has an impact on the business process, directly affecting the collaboration among the business, consumers, and employees. So while these mobility solutions appear tempting as they are, the key is to not go in for a "big bang" approach but to incrementally innovate and transform smaller/selected portions of the business that call for immediate attention and transform them to see the actual business value. As such, these mobility transformation projects will be LOB sponsored since they will be directing affecting the business lines.

For Enterprises

☑ As with any other transformation project, it is vital for enterprises to build a business case for their mobility initiatives.

☑ It is important to evaluate how the mobile app being developed will deliver a business value to both the enterprise and the consumers.

☑ Today's enterprises are asset-heavy, and a major challenge will be to see how the transformation to mobile can leverage the existing IT infrastructure. The IT infrastructure as such should be resilient and scalable to accommodate any future needs.

☑ For enterprises looking at partnering with a third party, it is essential that their IT providers have established COEs and apps that are both horizontal- and vertical-specific. They must be able to guide the enterprises to evaluate the apps that are suitable for their business needs and determine the level of customization that these apps require. This is a good opportunity for telcos that carry the data and enable services via their networks. So a partnership with a telco is quite a logical proposition here.

☑ It is essential that enterprises maintain support for all platforms and OS as well as provide a consistent experience across channels.

☑ Security and governance will be a continuous challenge with the infusion of devices and applications. Enterprises can consider having an internal application store for improved governance and risk assessment as an ongoing process for all mobility initiatives.
**For Vendors**

- It is essential that vendors have a complete ecosystem to be able to address the horizontal and vertical mobility solutions. Right partnerships and alliances can go a long way for any vendor guaranteeing success.

- Vendors with experience in managing hybrid cloud environments are best placed to guide customers with their mobility deployments.

- Mobility solutions in Asia/Pacific as such will need to have a localization component. While local players will have an upper hand here, they still lack the much-needed experience that the global players have gained from multiple mobility deployments across industries.

- Mobility is not just for the "big 4" firms but since these solutions are constantly evolving, they can be for any tier 2 players that can ramp up to IT service management (ITSM).

**LEARN MORE**

**Related Research**

- China Enterprise Mobility Solution 2013–2017 Forecast and Analysis (IDC #CN2673813V, May 2013)

- Bring Your Own Device In Asia/Pacific (Excluding Japan) (IDC #AP3054022U, January 2013)


- U.S. Managed Mobility 2012–2016 Forecast: Managed Solutions Gaining Steam as the Complexity of Mobile Strategies Increases (IDC #235161, June 2012)

**Synopsis**

This IDC study presents views on the existing and future state of consulting and integration (C&I) services for adoption of application-led mobile solutions in Asia/Pacific. IDC believes mobility is a critical tool for businesses to leverage as part of their transformation strategy. As such, mobility solutions are changing the engagement models between employees, consumers, and partners. While CIOs are looking at mobility, very few have a holistic view of how other technology elements of cloud, analytics, and social will be integrated to build a 360-degree view for business. IDC believes that mobility, while has benefits in itself, when tied to cloud (from a delivery perspective), social (from an engagement perspective), and analytics (from an intelligence perspective), the benefits are exponential.
"With mobility implementations, the key is to be proactive and build mobile platforms that can help adapt the constantly evolving market," says Prabhitha Sheethal D'Cruz, market analyst, Consulting and Integration Services, IDC Asia/Pacific. "Businesses also need to consider the overarching governance, risk, and compliance frameworks for mobility. Without having these in place, any efforts toward mobilizing the business will be met with fierce resistance from the board," adds Mayur Sahni, research manager, IT Services and BPO, IDC Asia/Pacific."