Industry views

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Convergence Monitor
Enterprise mobility*

Understanding what the workforce wants in the new converged world

*connectedthinking

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Contents

01 Executive summary

Until very recently, business managers could be forgiven for concluding that their people's demands for wireless devices were less about real business improvement and more about gratifying the appetites of early adopters for new toys and status symbols.

But today, increasingly, the desire for greater productivity and the need for access to business-critical information are driving companies to look at mobility devices and solutions as integral parts of their technology strategies. The workforce needs and wants to interact with customers, employees, information, assets and other businesses as and when it chooses. And the technology and communications sectors are jockeying to meet this demand.

This survey about enterprise mobility is the second in our global series of Convergence Monitor surveys[1]. We surveyed just over 8,100 partners and employees of PwC in 27 countries. Note that as we talk about the results of our survey and demands of the mobile workforce, we are referring to our survey population as opposed to the general population of workers.

Our survey reveals savvy, security-conscious users whose familiarity with and usage of converged services and technologies are well established and set to grow quickly. Approximately 75% work out of the office some or all of the time and 92% have a mobile phone. They want to be connected 'anytime, anywhere, anyhow'. They know exactly what they want – they want mobile applications, which give them the flexibility to manage their day 'their way' regardless of whether they are out of the office 10% or 90% of their time.

This survey provides more details concerning trends and developments in the mobile workforce, anticipates demand for certain applications and technologies, and prompts us to ask ourselves the questions: What does the workforce want and need? Who are the key stakeholders in the transformation that will occur? What benefits can an enterprise derive from rolling out wireless solutions? What can organisations do to effectively manage a technology rollout?

The answers to some of these questions are evolving, but we believe we see real clarity emerging around demand factors. In the pages that follow, we address the implications of this demand for enterprise mobility – for businesses and for the executives who run them.

75% of respondents work out of the office some of all of the time.

[1] The first in the series covered the Digital Home. Other primary research into consumer behaviours undertaken by PricewaterhouseCoopers includes regular focus groups in the US and the UK.

02 A changing marketplace

EMobility is this new world in which business users can interact in real time, from any location.

Not so long ago, the development of mobile technology was being driven primarily by individual and organisational innovators. The majority of enterprises were only beginning to explore the potential of mobile functionality beyond voice or e-mail, and many vendors were in the earliest stages of packaging offerings. And while mobile phones were pervasive, only early-adopting industries, such as high technology and transportation/logistics, were demonstrably leading the market in implementing mobile applications for specific business functions, such as handheld units for delivery personnel.

Today, however, most companies are starting to deploy mobility solutions for individual business processes and functions. Still, despite some early successes, many have yet to develop truly enterprise-wide solutions driven by a forward-looking mobility strategy. And, at the same time, hardware, software and services have varied significantly in quality, interoperability and security across regions and providers.

That said, we are now beginning to see additional activity in the enterprise mobility (EMobility) space as evidenced by, for example, Motorola's acquisition of Good Technologies and RIM's rollout of additional BlackBerry devices (Curve and WorldPhone). The Apple iPhone, which is considered to be more of a consumer device, is already altering the smartphone device we know today spurring wider usage of large screens, touch technology and Wi-Fi (allowing for a more interactive experience while reducing dependence on providers' mobile networks).

Consolidation, standardisation and experience are fuelling the advent of true enterprise mobility solutions. Carriers are finding ways to improve the network experience by building more reliable and faster mobile broadband networks such as Sprint's mobile WiMax in the United States or TMobile's @Home service, which allows customers to make calls from their mobile device over a Wi-Fi data network. Independent software vendors and mobile enterprise application pure-plays have been working toward Emobility platforms for years, and finally the market as a whole is delivering the mobile data bandwidth, device form factors, middleware and enterprise applications that will foster mainstream adoption of mobility products and services.

This new world in which business users can interact with customers, employees, assets, products, and other businesses in real time, anytime, from any location is what we define as 'EMobility'. The EMobility industry is on the cusp of a fundamental shift that will lower barriers to market entry, drive growth, and require innovation to retain and grow market share.

03 Global and regional trends

Road warriors are not the only ones driving demand

Contrary to popular belief, even a small amount of time spent working away from one's office can significantly affect demand for mobile solutions. In our own survey, it wasn't just our road warriors who wanted connectivity and access to applications while out of the office. Whether employees are out of the office 10% of the time or 90% of the time, global demand[2] was uniformly high (see *Figure 1*). The average score shown in this chart indicates the level of demand from respondents for mobility technology. This level of demand then stays reasonably constant regardless of time spent out of the office. The higher the score, the more urgent the demand and the greater the expected benefits in terms of productivity, client service and job satisfaction as a result of the feature. We noted a rapid increase in demand at the point respondents spent 10% or more time out of the office.

> 10% of time away from the office can justify the business case for mobile solutions.

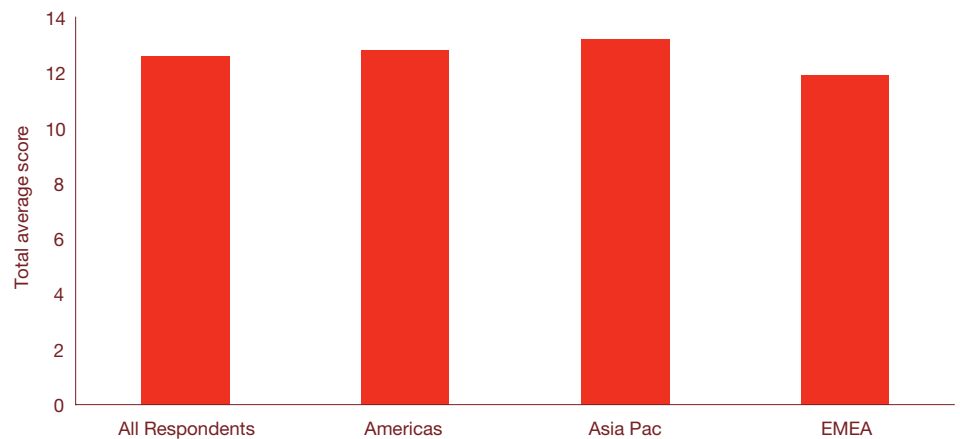Figure 1: Demand for mobile solutions versus time spent away from the office
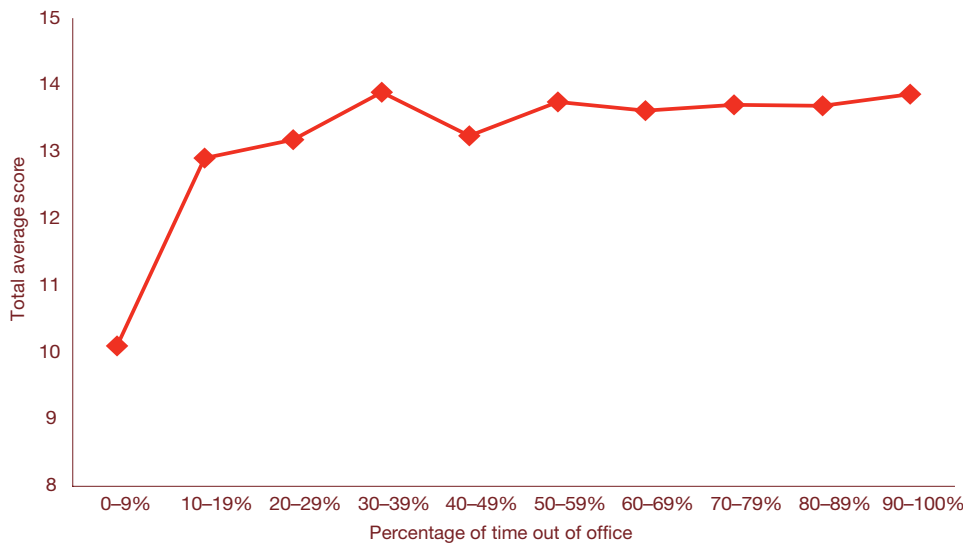
2 In order to assess the overall interest or demand for the technology features presented in this survey, PwC developed a score for each respondent that represented his or her response to each question. A higher score indicates a more immediate or more urgent demand for the function and greater expected benefits in terms of productivity, client service, and job satisfaction as a result of the feature. A full explanation of the scoring methodology is available in the 'Methodology' section of this report.

Our survey confirmed that, in a shrinking world, economies are increasingly having to react to global trends – and not just to local ones. For example, overall demand for mobile services was relatively consistent, with only slight variations from region to region (see *Figure 2*). The reason for consistent demand globally could represent a universal recognition of common business needs for wireless services as well as the growing availability of wireless services at an affordable price.

That said, at a country level we did note some variation in demand. (See *Figure 3*)

Figure 2: Average level of demand for mobile solutions by region

Figure 3: Average level demand for mobile solutions by country
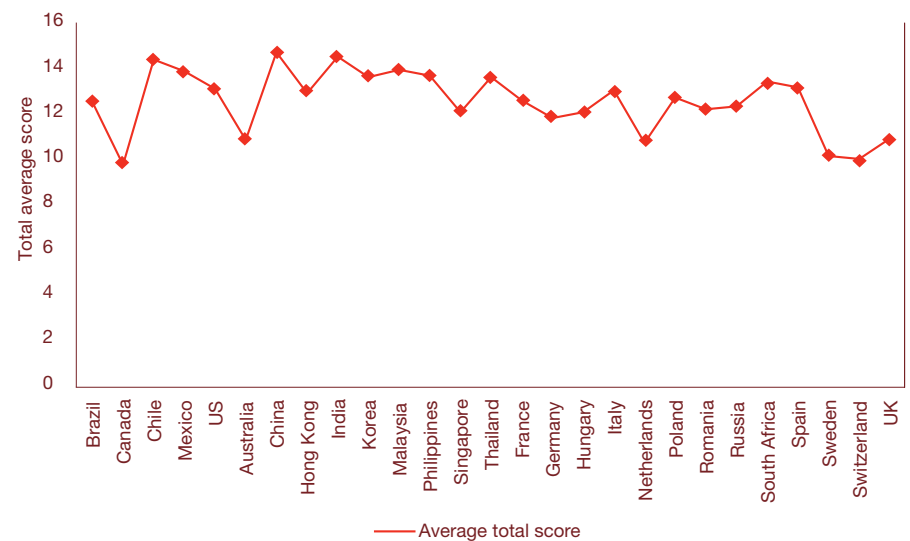
## What is the typical profile of the mobile worker?

Everyone is different – and any definition of the mobile professional worker needs to embrace a number of different behaviours. Respondents showing the highest mobile demand were, not surprisingly, (1) those serving external clients, (2) those who say they are usually the first, or amongst the first, to purchase new technologies and (3) those that pay to connect to the Internet (for example in hotels, airports or coffeehouses) four or more times per month. Customer-facing staff naturally will want to be able to receive timely information to meet customer needs, early adopters of technology are constantly seeking the 'next thing', and paying to connect to the Internet represents a desire to be connected while travelling.

In addition to these factors, age appeared to influence demand with respondents aged 35 or under expressing greater demand than did older respondents. Gender and region appeared to influence the level of demand marginally (see *Figure 4*).

Under 35s have the greatest demand.

Figure 4: The impact of age and gender on demand by region
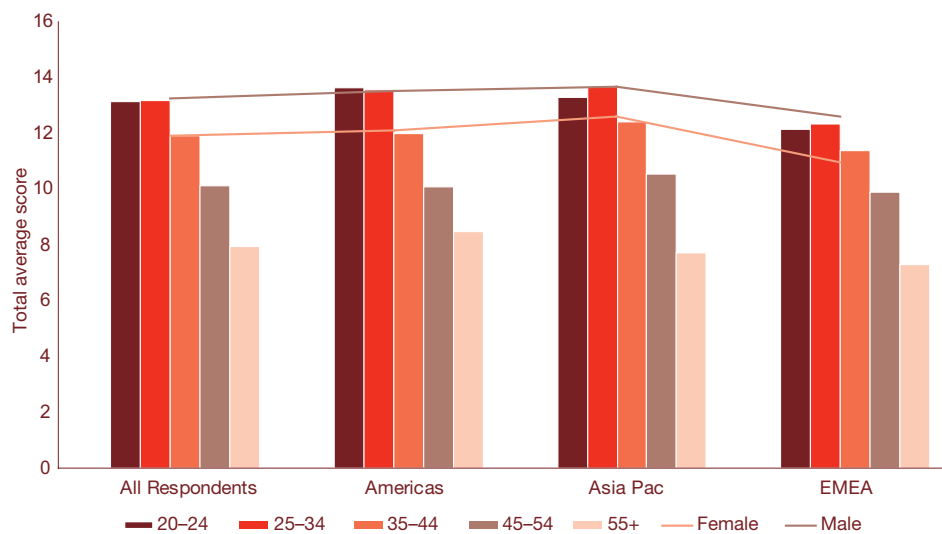
Increasingly, the enterprise workforce is becoming the knowledge workforce – and being connected helps them to deliver.

Productivity and autonomy

A few years ago, when mobile phones and later BlackBerries or smartphones were first introduced, enterprises expressed concern that employees would resent being constantly connected, seeing this as an unwelcome disruption of their work-life balance. Today, such concerns are becoming irrelevant. Increasingly, the enterprise workforce is becoming the knowledge workforce – they deliver value by creating, managing, interpreting, consuming and delivering information to an end user. To improve productivity for the workforce, employers must support efforts to reduce downtime and increase communication. Workers need to be connected to knowledge sources, including customers, other employees, the Internet or intranet, and back-office systems.

A recent study by Ipsos Reid[4], which focused on BlackBerry productivity gains and return on investment, noted that a company can achieve more than 60 minutes of additional productivity per BlackBerry user per day and also can improve workflow by enabling immediate access to time-sensitive e-mails. This is one example of improving both access to information and the level of communication amongst employees, and it illustrates why an enterprise would look to implement mobile solutions.

Taking a segmented approach

One of the first tasks that most organisations should address as part of their mobile strategy is to segment – that is, to analyse and profile – their workforce to help ensure that they select the mobile solutions that best meet the needs of both the organisation and the workforce. This does not mean simply deciding who does and does not need mobile technology. The real question is how can companies effectively and efficiently roll out wireless technologies that maximise the benefits to the enterprise? One way to focus the mobility strategy is to organise employees by segments based on similar characteristics, needs and work styles.

Typically, workforce segmentation can be performed via formal surveys or by conducting focus group workshops. With either approach, it is important to ensure that all critical business units are appropriately represented. The exercise should gather the mobility demand and requirements around business processes, data, device, location, security and organisational benefits. Once data have been collected, analytics can be used to identify the key factors influencing demand, as well as provide fact-based information for making sound business decisions.

[4] *Analysing the Return on Investment of a Blackberry Deployment*, Ipsos Reid, 2007

The importance of segmenting the workforce

Our survey provided the opportunity to perform a simple workforce segmentation exercise in order to better understand the differing demands for emerging mobile applications and technologies. With this goal, we segmented our workforce into the following four distinct worker profiles:

Mobile professionals: Customer-facing individuals spending 10% or more of their time out of the office

Local professionals: Customer-facing individuals spending less than 10% of their time out of the office

Mobile support staff: Internal support employees spending 10% or more of their time out of the office

Local support staff: Internal support employees spending less than 10% of their time out of the office

This allowed us to better understand the types of workers in our population, what they may demand and the reasons for that demand.

What the workforce wants and why

Our survey asked employees to rank their desire for specific available and emerging mobile features, as well as the perceived benefits of these features[5]:
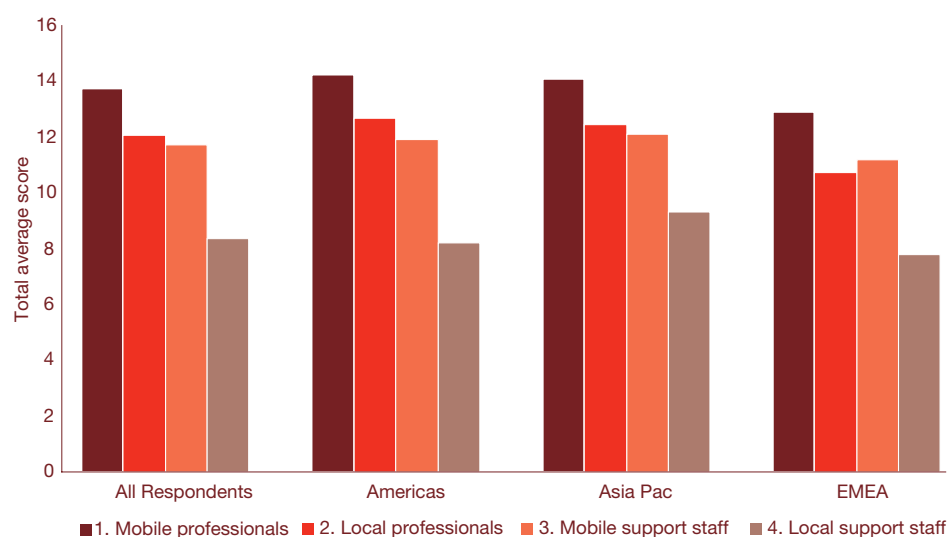
- Seamless voice and connectivity services
- Location-based services
- Business applications

Figure 5 indicates the level of demand for seamless voice and connectivity, location-based services and a range of business applications. Across all mobile technology areas of focus, we found that our mobile professionals have a much stronger demand than local professionals or support staff employees for these emerging mobile services. The results also highlighted a sense of urgency. They want these solutions sooner rather than later. More than 50% of mobile professionals would like to see features implemented within the next six months. These results were,

perhaps, not surprising – but they do provide a simple illustration of the importance of segmenting the workforce.
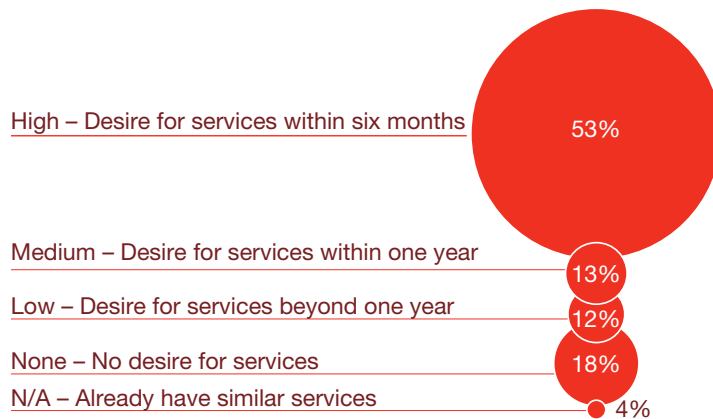
For example, an organisation may be looking into the possibility of offering its employees wireless broadband access using their laptops (a service currently available via most major wireless network providers). If the organisation conducts a similar survey and obtains comparable results, it may determine that only the mobile professionals have a high demand for this service – and that will benefit most the organisation by limiting its availability to this one group. Under these circumstances, a policy could be put into place limiting wireless broadband access to mobile professionals – delivering maximum benefit while limiting spending. This type of segmentation and profiling should support decision making and drive policy decisions as part of the overall mobility strategy.

Figure 5: Perceived employee demand for various mobile solutions

■ 1. Mobile professionals ■ 2. Local professionals ■ 3. Mobile support staff ■ 4. Local support staff

[5] Respondents were asked a series of scenario-based questions to determine demand. See Methodology section for detailed explanation.

High – Desire for services within six months   53%

Medium – Desire for services within one year   13%

Low – Desire for services beyond one year   12%

None – No desire for services   18%
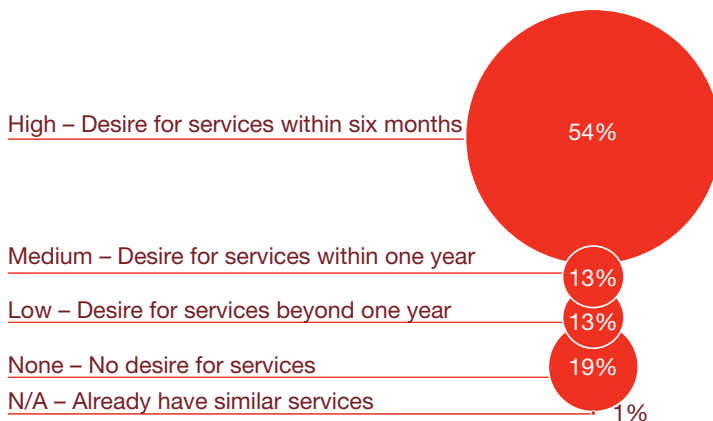
N/A – Already have similar services   4%

Seamless voice and connectivity

Our respondents clearly want the ability to connect as and when needed. The strongest demand was for seamless voice and connectivity services. Respondents want to be able to place a call anywhere and remain on it as they move, whether around a city or transitioning from their car, into a building, up the elevator and into the office or around their office location. They also want to be able to access data services from mobile devices or laptops wherever they are. It's all about having flexibility and autonomy – controlling the day as they choose, not having it control them.

On average, 53% (see *Figure 6*) of all respondents would like to have access to these types of services in the workplace within the next six months. Only 18% of those surveyed did not have a desire for these types of services. What appears to be the strongest influence driving this demand is the perceived improvement that it will bring to customer service and to job satisfaction, with 83% and 77% of respondents in agreement, respectively.

Figure 7: Perceived employee demand for location-based services

High – Desire for services within six months   54%

Medium – Desire for services within one year   13%

Low – Desire for services beyond one year   13%

None – No desire for services   19%

N/A – Already have similar services   1%

Location-based services

Location-based services (LBS) such as mapping and searching for goods and services ranked highest on the wish lists of mobile professionals. These services make sense for travellers seeking general information (in the form of directions or maps) about an unfamiliar area. Additional functionality such as locating nearby businesses (restaurants, hotels, coffee shops, etc) would also be helpful for travellers in unfamiliar surroundings.

Overall, respondents had a high demand for LBS (see *Figure 7*). Our survey found that 54% of them would

like to have access to these types of services in the workplace within the next six months. Only 19% of those surveyed showed no desire for these types of services. The strongest influence driving demand for LBS appears to be the perceived improvement in job satisfaction that these services will bring, followed by improvements in customer service and productivity. This is irrespective of the fact that, from an enterprise perspective, LBS has proved to be one of the leading mobile technologies in a number of industry sectors when it comes to improving customer service and enhancing employee productivity. Improving the ability to track and manage field technicians and job scheduling on a real-time basis is just one way in which LBS has proved its worth – improving business processes and helping enterprises to gain competitive advantage.

Just under 30% of respondents were concerned about the ways in which an enterprise could use LBS to track the movements and location of its employees, as shown by *Figure 8*,

which measures the extent to which the ability to track whereabouts negatively impacts demand. This is likely to be because the value each individual feels she or he receives from these services outweighs any privacy concerns. Further, the majority of companies are trusted not to misuse the information to which they have access via LBS. However, while most of our survey respondents were not concerned by LBS-linked privacy issues, privacy nevertheless is an important area for companies to address. Policies on how information can and will be used by an enterprise should be clearly defined and communicated to its employees.

At the regional level, there were some marginal differences with regards to privacy for Asia Pacific as opposed to EMEA and the Americas.

Figure 8: Percentage of respondents concerned about the ability to track and manage their location
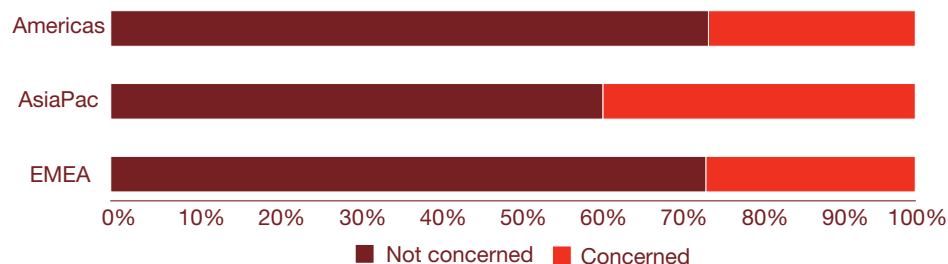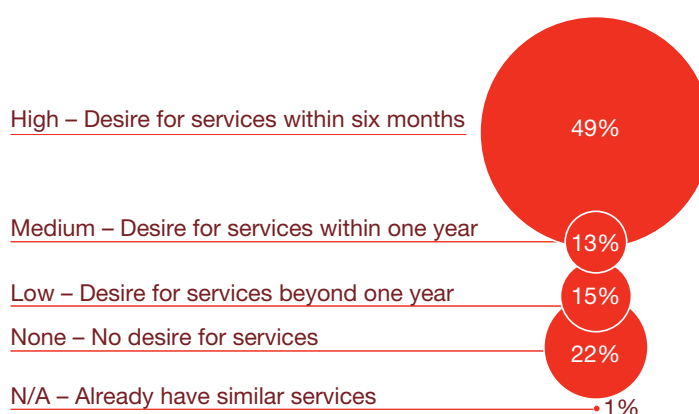
Business applications

Demand for business applications such as timesheet submissions on mobile devices was lower than for the other scenarios, likely reflecting the relative lack of robust applications that are truly suitable for mobile device screens. We expect that as the EMobility market evolves, more common business applications will be migrated to the mobile environment and others will be developed specifically for mobile devices, enabling ubiquitous connectivity.

As network speeds improve and the devices themselves improve, demand will increase for applications on handheld devices. The current resistance to business applications on the mobile device is due in part to the reality that the handheld experience pales in comparison to the interface on a PC, and in part to the fact that end users have to validate data with multiple sources – something that is much easier to achieve (and to achieve accurately) on a PC or in the office. With the introduction of new interface options in the marketplace (the iPhone's touch screen, for example), end users may gravitate towards the convenience of a handheld device as barriers to acceptance continue to be reduced.

Overall, respondents had a lower demand for business application services (see *Figure 9*) when compared to seamless voice and connectivity, and LBS. On average 49% would like to have mobilised business applications, which today typically require wired connections to the corporate network, within the next six months. Of those surveyed, 22% showed no desire for the types of business applications included within the survey. The strongest influence

Figure 9: Perceived employee demand for business applications

High – Desire for services within six months 49%

Medium – Desire for services within one year 13%

Low – Desire for services beyond one year 15%

None – No desire for services 22%

N/A – Already have similar services 1%

driving this demand again appeared to be the perceived improvements in job satisfaction and customer service capabilities, with 75% and 68% in agreement, respectively.

Respondents showed less demand for back-office functionality such as invoicing or training applications on mobile devices. Again, user experience on mobile devices, screen size and network reliability all play a part in the reduced demand for these services.

Opening up the corporate walls by mobilising business processes also brings about greater security risks for the enterprise. A recent report on information security[6] by PwC, *CIO Magazine* and *CSO Magazine* found that just under a third of respondents have cellular, PCS or wireless security standards and procedures, and 33% of respondents have wireless handheld device security solutions. What these findings highlight is that

much more work needs to be done in this area in terms of processes and technology.

For example, which party has the ultimate responsibility for managing these security risks? Is it the carriers, device manufacturers, application providers, end users or the enterprise itself? In most cases the real answer is "all of the above" – although it is interesting that 53% of our respondents thought that the enterprise was responsible for protecting work-related mobile devices from viruses, spam and/or hackers (see *Figure 10*). While the corporate security or IT departments of enterprises may ultimately be responsible for managing security risks resulting from mobilising processes, there will need to be cooperation by all major players in the evolving ecosystem in order to truly address an enterprise's security concerns.

Figure 10: End user responses on who is ultimately responsible for mobile-security-related issues
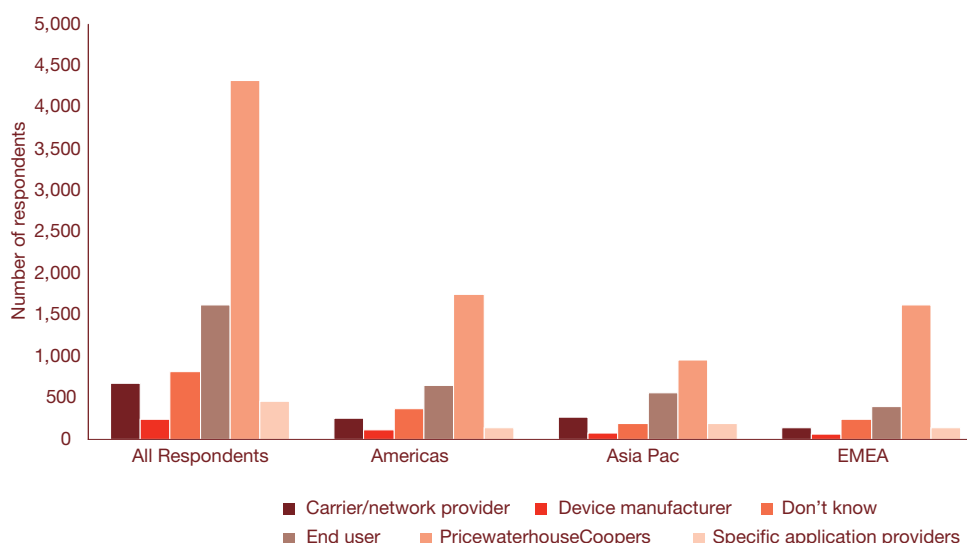
[6] *The Global State of Information Security Survey 2007* is a worldwide study by PwC, *CIO Magazine* and *CSO Magazine.* The study presents the responses of 7,200 IT, security and business executives across all industries and in more than 119 countries.

EMobility will power a quest for agility that enables enterprises to respond more quickly to customers, to work more effectively with suppliers and partners, and to foster collaboration among their own workforce.

04 Conclusions

In the next three years, we expect that enterprises will innovate and re-engineer business processes in order to harness the full potential of legacy or concurrent IT investments to increase the mobility of their workforce. Vendors are already driving toward enterprise-wide solutions rather than bolted on applications, and more core enterprise products will offer out-of-the-box mobility.

Increasingly, companies are equipping their workforces with mobile technology. Our own survey found that globally almost 50% of employees spend more than 40% of their time out of the office. A recent survey of executives by the Economist Intelligence Unit (EIU)[7] showed that 20% of employees in a wide variety of industries are mobile workers, defined as spending at least a day a week working away from their offices. EMobility will power a quest for agility that enables enterprises to respond more quickly to customers, to work more effectively with suppliers and partners, and to foster collaboration among their own workforce.

As our own survey suggests, it will not be just one or a few types of workers that require mobility. But will everyone need it – and if so, to what extent? To understand the breadth and variety of future demand, it may be helpful to think in terms of the information needs of traditionally mobile workers, such as service technicians and delivery drivers, on the one hand, and the need for mobility for knowledge workers on the other.

This means more than providing e-mail and Internet access on the road. Mobile employees will often require access to proprietary information and analyses about industries and the other businesses they interact with. This could include such bandwidth-intensive assets as photos and videos. Sales people will need up-to-the-moment information about pricing, inventory and shipping. Many enterprises have already started tracking inventory and shipped products with radio-frequency identification devices to enable round-the-clock visibility. Others are deploying online training solutions on mobile platforms in order to allow remote workers to stay abreast of regulations, safety information and processes. All of this calls for effective security measures – to protect the company's knowledge assets, as well as information pertaining to customers and partners.

It would be a mistake, we believe, to view EMobility as a set of tactical issues around the acquisition of new tools. It goes far deeper than that. Indeed, enterprise mobility is likely to transform many business processes. Therefore, it should be viewed as an important strategic endeavour, calling for processes that will need to become increasingly collaborative.

This transformation will raise new challenges about how to manage a mobile workforce and how best to achieve that hoped-for collaboration among workers dispersed around a region – or around the globe.

Mobility will be essential to an enterprise's competitiveness in its industry sector, as well as in the market for talent. We believe mobile assets will become critical to a company's ability to attract and keep the best workers. This is borne out by our survey, in which respondents indicating that mobile solutions play an important part in improving productivity and contribute significantly to perceived job satisfaction.

[7] *The quest for competitiveness: Business mobility and the agile organisation*, The Economist Intelligence Unit, 2007

Today, no single provider is able to deliver the full suite of services required to achieve the benefits of true enterprise mobility. This means that enterprises have to navigate a multitude of vendors to construct solutions tailored to and scalable for their specific needs.

Our survey clearly indicates employee demand for mobile services, but the enterprise still needs to identify the solutions that will deliver real benefits to its business. To do this successfully, companies need approaches to enterprise mobility that address the following five areas.

Strategy

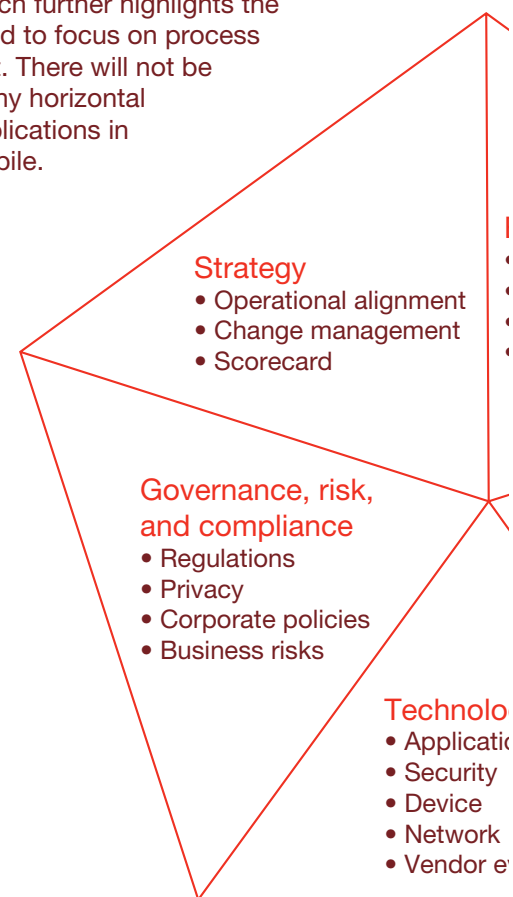### Placing corporate objectives at the heart of mobility

Understand the benefits the various segments of your workforce expect from mobile devices and applications and how they support the overall objectives of the enterprise. Examine in detail the various segments of your workforce and seek individual input about mobility needs. There is no one-size-fits-all approach. Our survey found demand for mobile services to be high, even among workers who travel very little. The enterprise must decide where and for whom solutions should be implemented. Although employee job satisfaction is critical, decisions about deployment should involve a more direct correlation to the overall business objectives, whether it is improving customer service, increasing productivity or driving costs out of the business.

Business process

Aligning business processes and IT for mobility solutions

Although technology enables a business process, on its own it will not be enough to drive results. Enterprises looking to implement mobility solutions need to focus on the business processes that will benefit most from the solutions, and this may entail complexity that will increase the difficulty of rolling out solutions. The killer application for mobile to date has been e-mail, which crosses all industry verticals. Mobilising business processes will require solutions that are tailored for a specific industry vertical – or even for a specific company function within a particular vertical. By focusing on the business process change and behaviour change first and the technology enabler second,

enterprises improve their ability to achieve the desired benefits. Additionally, this approach forces IT to execute on the business demands, further improving the IT and overall corporate alignment. Our survey indicated that demand changed according to job function, which further highlights the need to focus on process first. There will not be many horizontal applications in mobile.

Strategy
- Operational alignment
- Change management
- Scorecard

Governance, risk, and compliance
- Regulations
- Privacy
- Corporate policies
- Business risks

Technolo...
- Applicatio...
- Security
- Device
- Network
- Vendor e...

Technology

Enabling scalability and security

Mobile technology is in some respects unique. The enterprise seeking mobility solutions needs to select vendors and technologies that take into account that uniqueness and which also are capable of addressing the core business applications along IT's stated migration path.

Additionally, as our survey noted, employees are willing to give up personal information (such as location), which requires that enterprises address security concerns with any mobile offering. Just as important as ensuring employee security and privacy is ensuring the security and privacy of all corporate information that extends beyond the bricks and mortar of the office building. Mobile devices can have both business and personal uses (i.e. smartphones) and enterprises need to be mindful of the security risks associated with dual-purpose devices, along with the related policies and procedures needed to protect that information.

Business process
• Sales and distribution
• Transactions processing
• Field-force management
• Inventory/warehouse/ facilities operations

Management
• Voice/data expenditures
• Operations monitoring
• Device

Technology
…cations
…rity
…e
…ork
…or evaluation

Because of the compact size of mobile devices, loss of devices – and data – is a critical risk. A global survey by Pointsec on the number of mobile devices left in taxis found 11,322 PDAs, 120,225 mobile phones and 4,996 laptops left over a six month period (7.19 per cab)[8].

[8] *2006 Pointsec Taxi Cab Survey*, Pointsec

The enterprise needs clear policies and procedures to protect information. Procedures should address loss and replacement, such as the ability to erase content remotely.

Management

Addressing and managing the economics of mobility

The economics of mobility are not the same as those for other technologies. Although it is possible to manage the cost of access and drive cost reduction by ensuring that employees are on the best possible usage plans, mobility is not, for the most part, about cost containment. It is more about increasing productivity, improving the customer experience and/or improving employee job satisfaction – all of which are much more difficult to measure and manage. The value of the smartphone and always-on access appears to be readily accepted in the marketplace, but enterprises need to find methods of evaluating solutions and the successful implementation of mobility.

Before implementing a solution, the enterprise should define the business process objectives and the metrics that will be needed to evaluate whether those objectives are being met. They should then assess the change in those metrics over time to determine the financial benefit. Of course, rigorous cost management is required as well, but it is usually easier to assess the cost side of the equation than the benefit side.

Governance, risk and compliance

Developing policies that account for the unique nature of mobility; managing the risks to the company

As noted previously, mobile solutions create unique business opportunities, but they also carry risks for the enterprise. As device sizes shrink and capacity increases, the likelihood of losses of significant privileged data increases. Additionally, devices can serve both professional and personal purposes, which can increase the volume of lost devices and data. Last, multi-use devices can have features that are not appropriate for the workplace, like cameras, which could create privacy concerns if misused.
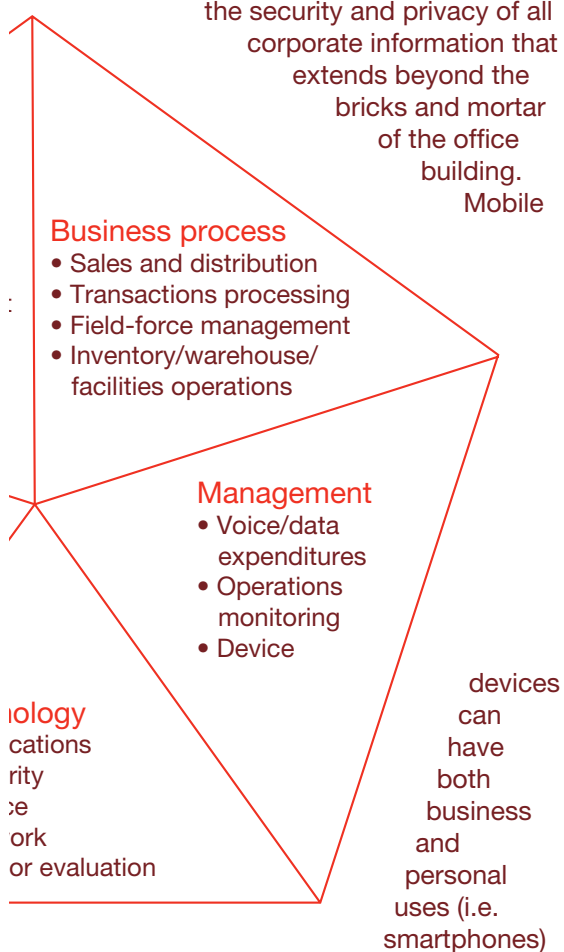
As device usage increases, the risks to the enterprise increase. Employees need to understand the risks associated with mobile device use, and the enterprise needs effective methods for monitoring and ensuring appropriate usage, protocols for coping with lost data and a governance structure to monitor appropriate use.

06 Methodology

PricewaterhouseCoopers surveyed approximately 8,100 PwC partners and employees from 27 countries on their current use of mobile technologies and their demand for converged enterprise solutions in the near future. This is the second in a series of online surveys that we have titled the Convergence Monitor.

We believe that the trends identified in the survey will provide insight into workforce preferences and behaviours that will be of interest to all companies as they explore the benefits of enterprise mobility.

The survey represents the following countries: Australia, Brazil, Canada, Chile, China, France, Germany, Hong Kong, Hungary, India, Italy, Korea, Malaysia, Mexico, the Netherlands, the Philippines, Poland, Romania, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Thailand, the United Kingdom and the United States of America.
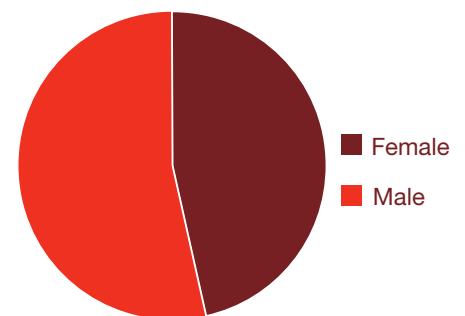
Percentage of respondents by region

- Americas
- Asia Pac
- EMEA
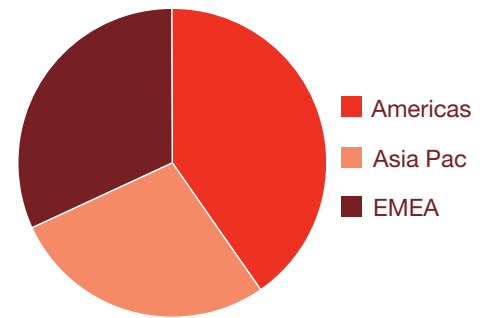
Percentage of respondents by age

- 20–24
- 25–34
- 35–44
- 45–54
- 55+
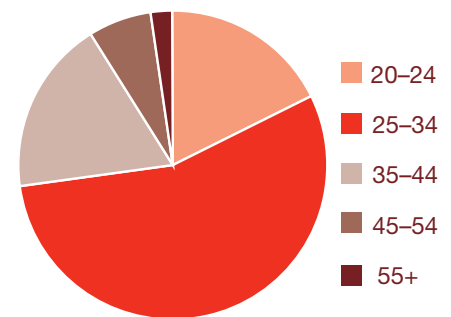
Percentage of respondents by gender

- Female
- Male

A note on our scenario-based approach

PwC asked respondents questions about 10 scenarios in order to measure demand for the adoption of mobile technologies related to seamless voice, ubiquitous connectivity, location-based services, business application, and security features.

Rather than asking direct questions about particular devices or applications (many of which are just evolving), we asked respondents to react to scenarios. Therefore we had to describe the service offering in more robust detail in order to determine their demand. The following scenarios were categorised by service type in order to perform analysis.

Seamless Voice

Scenario 1: As you drive into your office parking lot, you are talking to a client on your mobile phone. In the past, you would sit in your car and finish the call because you have always received spotty service in your office building, especially in the elevator. However, the firm recently installed a Wi-Fi network that automatically switches the call on your phone over to an IP network as soon as you enter the building. You continue your call without any degradation of service in the elevator or on the walk to your office.

Scenario 2: Needing to check your voice mail, you call just one number and are able to access your personal voice mail and your work voice mail at the same time - no longer having to call one number for your wireless device and another for your work voice mail. You can control when your work calls are forwarded to your mobile device and when to your work voice mail; and you can use internal extensions (typically four or five digits) to dial colleagues.

Scoring method

In order to assess the overall interest or demand for the technology functions presented in this survey, PwC developed a score for each respondent that represented his or her response to each question. A higher score indicates a more immediate or more urgent demand for the function and greater expected benefits in terms of productivity, client service and job satisfaction as a result of the function. The following table provides the basis for this score.

Using this scoring methodology, each respondent could have a score between 0 and 5 for each metric, and a total score between 0 and 20 for each scenario. An average score for each respondent across all 10 scenarios was also calculated. Statistical analyses were conducted to identify relationships and differences among the survey data.

in your local office from your wireless device. Your wireless device notifies you when you have a voice message from either your work number or your wireless number - eliminating the need to check for missed calls.

Ubiquitous Connectivity

Scenario 3: You are preparing for a meeting with the operations manager of a client's manufacturing plant. On your way to the plant, you remember seeing a document on an in-house knowledge database that you think the manager might find interesting. Knowing that the plant has no active network connections, you check your mobile device and see that you have full coverage. You connect your laptop to the internet via your mobile phone or datacard, and quickly download the article you want to share with the operations manager.

Location-Based Services

Scenario 4: On your way to the airport, you get a notification (SMS text message) that your flight is cancelled. You also receive notification on your mobile device from your travel system that an alternate flight is scheduled to leave at the same time your original flight was, and the question, "Would you like to book a reservation on this new flight?". You accept the reservation and continue to the airport.

Scenario 5: You conclude a long day of out-of-town client meetings later than expected and decide to stay at the nearest hotel. Based on your location, your mobile device queries PwC's travel agency for the nearest available firm-approved hotels. You select a hotel, your reservation is automatically made and you receive directions based on your current location.

Scenario 6: You are on your first visit to a client location and get lost. Using your mobile device, you enter the address and receive directions

from your current location to the client site. Note that because your device is enabled with location-finding technology, you do not need to enter a start location.

Business Applications

Scenario 7: After travelling all week on a business trip, you are at the airport awaiting your 5:00 p.m. flight home. The deadline for submitting your time sheet and expenses is 8:00 p.m. Rather than find a wireless connection for your laptop, you turn on your mobile device and submit your time sheet and expenses in real time via a mobile application before the flight boards.

Scenario 8: Having recently wrapped up a two-month project, you need to submit the final client invoice today. You are at another client site without your laptop. You turn on your mobile device and pull the final revenue figures for the project code needed to submit the bill from a mobile application.

Scenario 9: You are on a three-hour train ride to a meeting and do not have your laptop. A two-hour training webcast was recently completed and you want to view the rebroadcast. You turn on your mobile device, connect to the webcast through a mobile application and listen to the entire webcast on this device.

Scenario 10: After taking a taxi from the airport to your hotel one evening, you realise a few hours later that you left your mobile device in the backseat. You immediately call a phone number and enter a special code, which sends a wireless signal to delete all data from your mobile device - rendering it useless for anyone who finds it. Assume your data was recently backed up.

Metrics

Timeliness	Productivity	Client Service	Job Satisfaction	Points Assigned
Immediately	Greatly increase	Strongly agree	Strongly agree	5
Within 6 months	Moderately increase	Somewhat agree	Somewhat agree	4
Within 6–12 months	Somewhat increase	Neutral	Neutral	3
Within 12–24 months	Slightly increase	Somewhat disagree	Somewhat disagree	2
After 24 months	No increase	Strongly disagree	Strongly disagree	1
N/A - I don't need this service/feature				0
N/A - I already have this service/feature				0

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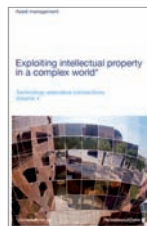*Convergence Monitor: The Digital Home*

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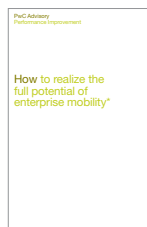
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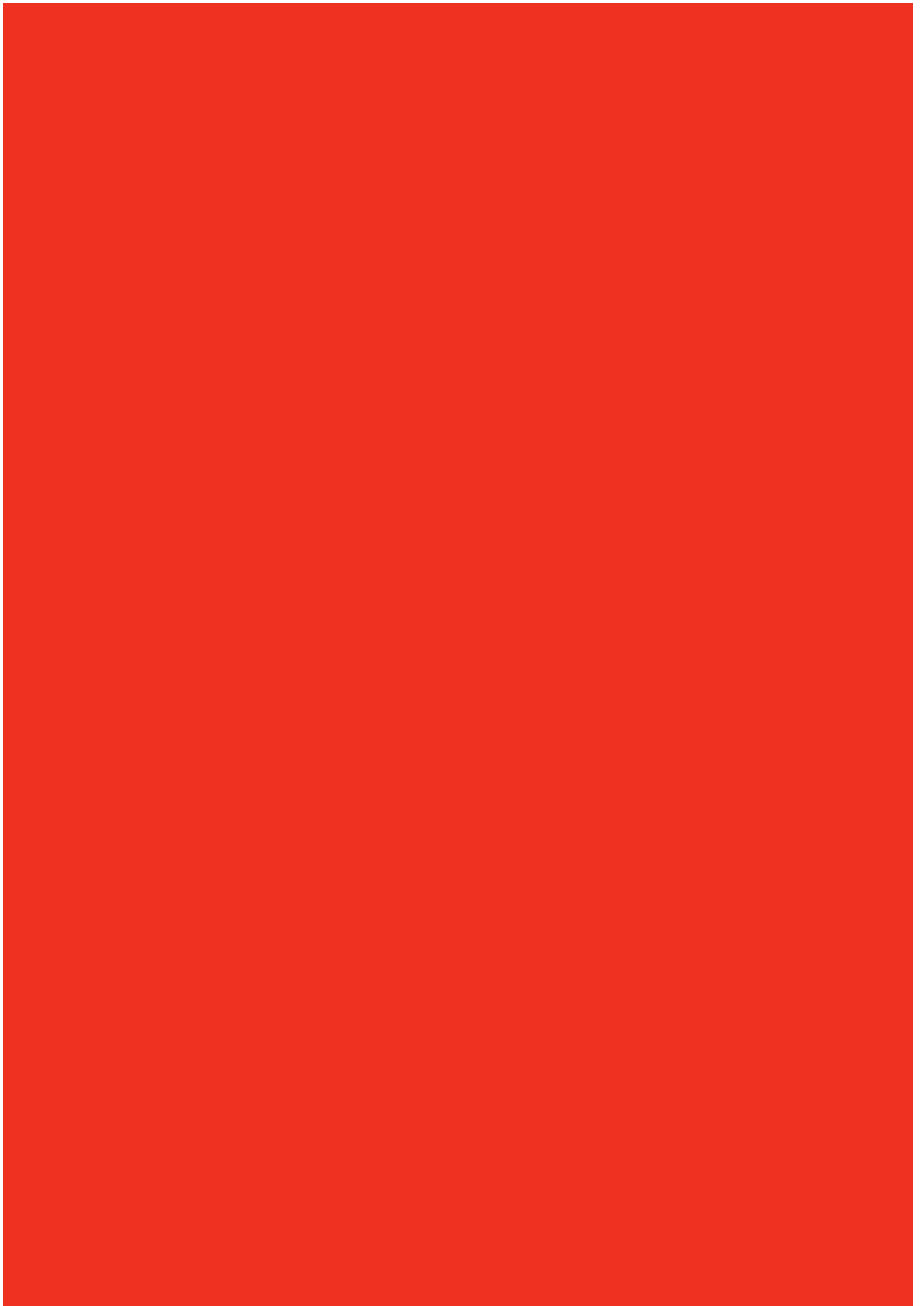
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