Enterprise Mobility
A framework for success
Based on the lessons we’ve learnt from our many client engagements around the world, this collection of articles and case studies gives you insight into the latest developments in enterprise mobility.

The book follows the structure of Dimension Data’s Enterprise Mobility Framework, which you can read about on page 6. So, you can dip into the chapters that make the most sense in the context of your organisation’s requirements right now, then move on to the rest.

Throughout the book, you’ll find sample questions from the Framework to help you evaluate your organisation’s mobility maturity.
Introduction:
About Enterprise Mobility
Preparing for a Mobile Future

Worldwide, organisations are embracing enterprise mobility. Businesses that successfully grasp the impact of this trend can use it as a competitive advantage. Enterprise mobility can have a transformational effect on the way employees think about the way they work, and it can drive innovation and change in terms of process efficiencies and productivity in ways never seen before.

However, gaining a firm grasp on the evolving drivers of this trend and the scope of its impact are fundamental first steps to realising its many benefits, and sidestepping its possible risks.

Waves of change

The rise of the remote or mobile worker continues to drive mobility. Today, there are more mobile or partially mobile workers in the world than desk-bound employees. The definition of a ‘mobile worker’ has also broadened. It’s not only sales staff and field technicians who are mobile, but also people in a range of jobs we previously thought of as ‘fixed’ or ‘on-site’ – from in-store retail staff to call centre agents.

Employees are also exercising more choice and assuming control; they’re demanding access to work tools at any time, from anywhere, using any device. For many, the notion of turning to the corporate IT department for access to applications, features or support is becoming a distant memory. This is compelling organisations to handle the impact of these trends and accelerate the rapid adoption of smart devices throughout organisations.

Tools and tactics

So, as enterprise mobility continues its move into the mainstream, what’s the way forward to harness it for business benefit?

- Businesses need to **recognise enterprise mobility’s touchpoints across all elements of the organisation**, including employees, networks, devices, operations, expense management, security, and applications.
- Success calls for a **structured mobility programme** that spans organisational units and functional disciplines. This involves developing, integrating, and/or redefining corporate policies.
- Mobility solutions will continue to grow and expand beyond initial pilot or proof-of-concept deployments, forming an integral part of IT services and management infrastructure. This will require implementing **multi-faceted mobility policies** for various user groups, datasets, applications, and access levels.
- **Identification, authentication, and access management**, governed by effective policy management, are set to become the cornerstones of any successful mobility initiative.
- Businesses must look for opportunities to **develop and deploy customised mobile applications** for their customers and partners to improve the efficiency of all their communication channels. Examples could include new applications that harness social media or that target smartphone-carrying visitors to shopping centres or retail stores.
- For businesses that have the basic mobility components in place, the focus over the next few years should be on **integrating mobility concepts into the existing collaboration environment**. For example, the productivity gains of mobility truly come into play when employees not only have Wi-Fi access everywhere in the building via their smartphones and tablets, but can also share work documents or join Web conferences from anywhere.
- **Wireless networks** must change from simply providing access to becoming a **strategic asset**, as smart devices use wireless as their primary on-campus access method.

Possibilities … and opportunities

With enterprise mobility changing the face of business, knowing what choices to make can be a challenge. In publishing Enterprise Mobility – a Framework for Success, we hope to help answer some of the questions you may be asking as you get to grips with the possibilities and business opportunities that this new model offers. The articles and case studies that follow have been collected through our numerous client engagements around the world and showcase some of our best thinking today and ultimately point to one common principle: with a well-structured and coherently executed enterprise mobility framework in place, success is well within your reach.
Components of the Enterprise Mobility Framework:

- **End user-centricity**: take a user-centric view towards mobility and understand users’ needs and expectations around communication, community, and productivity.
- **Diversity of devices**: identify the range of smartphones and tablets your business needs to support.
- **The network**: provide one seamless experience whether users are on campus Wi-Fi or hotspots, home or branch office LANs, or mobile broadband networks.
- **Adaptive security**: implement a security strategy that covers policies, technology, and people.
- **Operational excellence**: support users in terms of governance, operational systems, and strategic initiatives and decisions.
- **Applications**: identify which applications to mobilise – for example, social, community, and productivity applications.

By gathering these insights, you’ll be in a position to develop a framework to guide you and ensure that your architecture, systems, business processes, and continuous innovation are aligned, integrated, and able to support your strategy as it evolves.

Enterprise mobility matters. Organisations that prioritise mobile computing and lay the right foundations to provide compelling experiences across multiple platforms will be at the forefront of the collaboration and productivity tidal wave. Putting in place an actionable strategy and roadmap is the first step to ensuring that your business is one of them.

In the pages that follow, we’ll explore the detail behind the Enterprise Mobility Framework in more detail.

Common questions include:

- Which users do I need to support or enable?
- How can I support device diversity?
- What security mechanisms do I need to put in place?
- Which applications should be mobilised?
- How can I ensure that operations management is successfully implemented?

To help our clients chart their way forward, we’ve developed an Enterprise Mobility Framework. The Framework is a lens that allows you to look at mobility in your organisation from different angles and identify the interdependencies of the various components: users, devices, networks, security, operations, and applications.
People are passionate about and connected to the devices they use in their personal lives and bring those devices with them to work. They insist that they’re more productive with their own devices because they know how to use them. So, in addition to their personal applications, they expect to have access to certain business applications, too. We’re no longer predicting whether the use of personal devices at work will be popular: we’re acknowledging its inevitability and discussing what needs to be done to manage it.
Dimension Data believes the answer lies in a structured approach to device management. One that’s anchored by a formal policy that governs employees’ use of devices and their access to business data and applications. Questions to ask include:

- Which devices may be used inside and outside the organisation and for what purposes?
- Should we issue employees with company-owned devices or allow them to use their own?
- What security mechanisms do we need to put in place for each scenario?

The range of devices available today – and the capabilities embedded in them – have changed how people work forever. Understand that, and set your plans in line with that understanding, and you’ll be a step ahead of the game.

The bring your own device (BYOD) challenge should be approached as part of an overall enterprise mobility strategy.

An important element of a unified communications and collaboration (UCC) strategy is to support UCC applications on the majority of, if not all, devices used for enterprise collaboration, including on mobile phones and tablets. Dimension Data’s 2013 Global UCC Study shows that both users and decision-makers indicate that BYOD is a growing trend which must be managed.

In emerging markets such as Brazil, China, India, and South Africa, more than 70% of employees who own a smartphone or tablet report using it for work. But fewer than 30% of enterprises say they support any employee-owned smartphones or tablets.

These organisations recognise the gap, at least to some degree: our decision-maker survey reveals that massive investment in BYOD support is planned in many countries (UK, Spanish, German, and Chinese companies have the most immediate plans). But in others, investment plans to support BYOD are patchy at best. It’s clear that, in general, organisations are keen to take action, but reactions and plans vary and are still in a formative state.

As such, it’s important to see BYOD in context. BYOD strategies and solutions may help you manage and control a specific subset of devices used for enterprise communications or network access, but ideally BYOD should be part of an overall enterprise mobility strategy. This strategy should treat device ownership status as just another parameter, such as employee type, mobile operating system, device type, tariff plan, and remote access management.

**Figure 2: Plans to support employee-owned smartphones and tablets**

<table>
<thead>
<tr>
<th>Support Plan</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support now</td>
<td>46%</td>
</tr>
<tr>
<td>Expect to support in 12 months</td>
<td>20%</td>
</tr>
<tr>
<td>Expect to support in 24 months</td>
<td>7%</td>
</tr>
<tr>
<td>No plans to support</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: Ovum

BYOD: 6 Lessons Learned

The potential advantages of BYOD initiatives are clear and widely accepted. By allowing employees to use devices with which they’re familiar and comfortable, you can lower the costs associated with acquiring, deploying, and maintaining devices, and reduce the number of required support personnel. However, you also need to think through the new breed of risks and vulnerabilities that this approach ushers in.

Many early adopters are reining in or revisiting their BYOD ventures altogether, having had their fingers burned. Once you commit to a BYOD initiative, it can be challenging – and costly – to reverse-engineer your efforts.

Getting it right – the first time

When it comes to BYOD, it’s far better to get it right the first time. That’s why it’s critical to clarify the business outcomes you’re looking for and to thoroughly assess all the legal, licensing, management, and security implications before you take the plunge. What are some of the most common stumbling blocks encountered by those that rushed into BYOD programmes?

The most frequent oversights relate to mismatched company–user expectations, failure to take into account the relative risk profiles of different device types, poorly defined service level agreements, and licensing bundles. You need to consider the following tactics to circumvent these issues:

1. **Survey your user base**
   It’s not uncommon for BYOD programmes to falter because user expectations are not met. Don’t assume you know what your employees want or expect, or you’ll run the risk of even greater levels of dissatisfaction post-deployment than before. Ask employees what device – or devices – they’d like to use in the workplace, and for which tasks. Establish whether they’d prefer to purchase their own devices or use those owned by the company. Survey the employees and set up a user community forum to get buy-in from the users.

2. **Balance device risk profiles**
   From a security perspective, all mobile devices are not created equal. A typical smartphone, for example, costs a few hundred dollars and involves relatively low security risks and licensing costs – all of which make it a strong candidate for inclusion in a BYOD programme. Laptops and tablets, however, are a bit more tricky – they’re more expensive and represent a larger business risk, as they carry more data. For many businesses, the hazards of supporting a ‘BYO-laptop’ initiative often outweigh the benefits.

3. **Define service level agreements**
   Poorly defined service level expectations are often a subject of frustration and contention among early adopters of BYOD programmes. For example, if an employee-owned device breaks, what’s the expectation for the employee to have the device repaired in a timely manner, to avoid productivity lapses?

4. **Anticipate connectivity conundrums**
   Much of the negativity surrounding early BYOD deployments centres on connectivity issues. Your network will need to support a variety of new devices, so be proactive about ensuring that user experience isn’t compromised by insufficient bandwidth. Here, network optimisation tools can be useful. In addition, consider upgrading your wireless infrastructure in meeting rooms and communal areas. Negative user impact can derail the success of a BYOD programme due to poor wireless connectivity; re-planning wireless infrastructure is critical in order to support the additional load of new wireless devices (tablets, smartphones, etc.).

5. **Revisit licensing agreements**
   Many early BYOD adopters have found that the anticipated cost savings of their BYOD initiatives were never realised, because of a subsequent upsurge in software licensing costs. This is something you need to address well ahead of rolling out a BYOD programme. You also need to ensure that you don’t fall foul of the terms of use clauses within your existing software licensing agreements. In order to comply with vendor licensing agreements, anticipate having to define a supported device list and terms of use.
6. Monitor costs

Review mobility bills monthly to keep tabs on how much data employees are consuming, and the number of calls and texts sent from mobile phones compared with the rest of the company. There are three major benefits to reviewing bills:

- You’ll recognise patterns and can ensure employees are on the correct plan. Do they consume too little? Are they consuming too much? Recognition of these patterns and resulting plan adjustments can save money and prevent unnecessary charges.
- You’ll identify any abuse, such as an employee watching movies on 4G every day.
- You’ll identify false or illegal charges, such as ‘cramming’, before it’s too late.

Even if employees are getting the bills, employers should offer to assist with selecting the correct plan.

The future looks bright

With thoughtful, upfront consideration of user expectations and the management, security, connectivity, and licensing implications of a BYOD programme, organisations will put themselves in a strong position to implement a strategy that makes business sense … and keeps users satisfied and productive.

BYOD does indeed have a bright future, but there’s still a certain degree of immaturity in the market. There’s no better time to heed the lessons learned by those who are already testing the water.
Policy – The Cornerstone of Successful Mobile Device Management

If recent mobility ‘horror stories’ have taught us anything, it’s that you must have a formal, company-wide policy which regulates the use of mobile devices. Here are some suggestions on what to include:

The employer’s rights and employees’ responsibilities to secure enterprise data

This may include the organisation’s right to lock or wipe lost devices, and employees’ rights to privacy on a shared work or home device.

Device expenses

Define exactly what employees can claim for – and whether there are any exceptions. What is an allowable work-from-home expense? Does optional out-of-office time, such as attending a recital, count? There’s no standard answer – but it’s important that management and the HR department agree on an answer that’s right for your organisation.

Device usage

Employees using too much data – or not using it wisely – can cause major budgetary headaches. If your organisation is paying the entire mobility bill, set limits on data use, roaming, and travel. Make sure each employee knows what the limits are – state the limits in a contract that employees have to sign.

It bears repeating that the policy should be formal and in writing. This protects both employers and employees.
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Case Study − Dimension Data Unlocks the Business Benefits of BYOD

Dimension Data in Australia kick-started its BYOD journey over two years ago … and hasn’t looked back since. It realised early on that embracing BYOD was the only way that the organisation would be able to keep up with the mobility boom. Over time, the frequency of people moving between devices has increased, not to mention the number of devices they’re carrying. The average number of devices used by each individual in the business is around 2.9.

People and policy
As a first step, the IT team set out to create a BYOD policy … which it thought would be a quick and easy process, but which quickly evolved into a great deal of work. As the policy took shape, sections of it were posted on the Dimension Data intranet so employees would have an opportunity to have their say and provide suggestions.

People were really paying attention. The IT team quickly realised how passionate employees were about this topic and that it was something that affected them.

Dimension Data Australia has had a bring your own device (BYOD) scheme running for two-and-a-half years and is reaping the benefits of increased flexibility around the workplace.

Tools of the trade
With a BYOD policy in place, which is reviewed quarterly, Dimension Data proceeded to roll out a Citrix infrastructure inside the business to facilitate the delivery of virtual applications to personal mobile devices. The organisation also adopted Cisco collaboration tools for sharing files between work desktops and mobile devices.

Support from Dimension Data’s internal IT team is available to employees who opt into BYOD, as soon as they’re logged into Citrix. Users also needed to register their personal devices through Dimension Data’s mobile device management platform.

One component of the BYOD policy that employees are most happy with is the lack of restriction on which devices workers can bring into the organisation. Instead, there’s only a minimum requirement that devices have to meet.

BYOD has also changed the way the IT team acquires applications into the Dimension Data business. It now looks at apps from a mobility-first perspective – somebody using a mobile device in the field – rather than from the perspective of a desk-bound employee.

Opportunity knocks
The next phase of Dimension Data’s BYOD journey will involve connecting all the mobile devices with the data at the back-end of the business. The organisation is looking to implement a number of different mobile applications, including one that will aid in faster contract fee collection for the finance department as well as an easy timesheet tracker for field engineers. This will put the business in a position to do things it couldn’t do before.

The IT team quickly realised how passionate employees were about this topic.
The network – and network singularity – represents the cornerstone of a successful enterprise mobility strategy. The network must deliver a single, seamless experience, irrespective of whether users are on campus Wi-Fi or hotspots, home- or branch-office LANs, or mobile broadband networks.

This is often easier said than done. Traditional networks and access methods are coming under increasing pressure from a variety of sources. Employees are attempting to tap into corporate networks using an array of devices and from various locations – from home, at a customer site, or while travelling – at any given time. How do you ensure that your network doesn’t buckle under the strain?

Success depends on more than just an optimised network infrastructure; it also calls for a well-considered strategy and documented policies. You need to decide what network access restrictions to put in place, depending on the user, device, data, and location … without restricting employees’ productivity. In addition, a user segmentation matrix can help ensure that every employee has the appropriate level of access to the network, depending on their particular roles.
The growing popularity of mobility programmes is driving more businesses to deploy wireless networks. Dimension Data believes that enterprise mobility is inevitably and dramatically changing the structure of networks.

The results of Dimension Data's 2013 Network Barometer Report confirm that businesses are rapidly making network architecture adjustments in support of growing enterprise mobility demands. Today, most campus networks consist of approximately 80% wired ports serving individual users, and 20% wireless LAN ports supporting multiple users, despite the growing demand for ‘anywhere access’.

The network of the future, which will be accessed predominantly wirelessly, will require most of its ports – perhaps every port – to support power-over-Ethernet and gigabit Ethernet. Pervasive wireless access will also have an impact on the uplink environment. Since there will be fewer access switches serving end users, more bandwidth will be required from the access switch into the core network.

However, it appears that businesses still have some work to do. The Report indicates that today, just under half of all access switches support power-over-Ethernet, while just under a third support gigabit Ethernet. More significantly, only 13% of the access switches we discovered support 10 gigabit uplinks. These three requirements will likely compel businesses to accelerate the refresh of their networks’ access layer in order to meet the needs of enterprise mobility.

Networks that are predominantly wireless will cost far less to roll out than the traditional, wired networks they’ll be replacing. They’ll also create a strong foundation for lower operational costs because they’ll be easier to manage, provide unified access, and require less power and cooling. It’s expected that the combination of these factors, in addition to pressure from end users, will eventually turn the 80:20 ratio on its head so that future networks will be 80% wireless and 20% wired.

About the Network Barometer Report:

The 2013 edition of Dimension Data’s annual Network Barometer Report presents the aggregate data from 233 Technology Lifecycle Management Assessments conducted by Dimension Data in 2012 for its clients around the world. The Report reviews networks’ readiness to support business, by evaluating the lifecycle status of the discovered network devices, potential security vulnerabilities and operating system version management. The metrics provided in this Report are obtained from the automatic, electronic collection of data from these Assessments (not from a survey).

The Report is available for download at http://www.dimensiondata.com/networkbarometer
Figure 3: The access network – 80:20 moving to 20:80

Current – traditional wired and wireless access networks

- wireless networks (100 - 200 devices)
- cabling (1 point per access point)
- smartphones
- tablets
- laptops

Future – predominantly wireless access networks

- wireless networks (100 - 300 devices)
- cabling (1 point per access point)
- smartphones
- tablets
- laptops
- printers
- video, etc.

- wired network (10 users)
- cabling (20 points)
- video endpoints (some could be wireless)
- security systems
Today, the business is in a position to implement a comprehensive enterprise mobility strategy in a structured and coherent manner.

**Steps to success**

Initially, the organisation believed that upgrading its VPN infrastructure would enable it to support these objectives and keep risk at bay. However, upon meeting with Dimension Data, it quickly realised that the network infrastructure couldn’t be viewed in isolation … it would need a more holistic approach to enterprise mobility. It was agreed that the logical next step would be for representatives of the client and Dimension Data to conduct an Enterprise Mobility Development Model workshop to determine the organisation’s current technical and organisational status, and to develop recommendations for a structured and secure enterprise mobility roadmap.

**Discussion and learning**

During the workshop Dimension Data was able to identify strengths and areas that required improvement in terms of network infrastructure and security. The engagement was an interactive process which allowed for discussion and learning regarding enterprise mobility competencies. Outputs from the workshop focused on the client’s ‘as-is’ position and ‘to-be’ desired position.

Dimension Data proposed the following recommendations:

- definition of a comprehensive mobility strategy
- implementation of a new VPN solution
- deployment of an authentication and authorisation solution

Today, the business is in a position to implement a comprehensive enterprise mobility strategy in a structured and coherent manner.
Case Study – US University Keeps Pace with Users’ Wi-Fi Expectations

Like many educational institutions, a North Carolina-based university was experiencing an increasing demand for ubiquitous wireless LAN (WLAN) access on the part of employees, faculty and students. At any point in time, a student can have up to six wireless devices, all acquiring IP addresses and connecting to the WLAN. The university recognised that it needed to re-evaluate its current level of WLAN access to ensure it could keep pace with these demands.

A sparsely deployed and ageing WLAN offered poor coverage, which resulted in ongoing user complaints, loss of productivity and increased help desk service requests. The university also lacked confidence in the security of its existing network, which raised concerns regarding the possibility of financial loss and reputational damage. Management of the WLAN was a cumbersome affair. The IT team lacked a centralised management platform and configuration changes had to be made to individual access points – of which there were over 800 – manually. This arrangement also made it impossible to roll out simultaneous upgrades to the infrastructure.

The university engaged Dimension Data to migrate the legacy WLAN to a more robust and scalable solution that would provide it with the coverage and throughput required to support the access needs of its faculty, employees, and, most importantly, students. Dimension Data undertook preliminary planning sessions with WFU and developed a comprehensive roadmap for the campus-wide WLAN refresh. Using this roadmap, we commenced with the roll-out of the three-year project.

The new WLAN has provided the University with vastly improved wireless coverage. Concerns regarding the security of internal and guest users’ data are a thing of the past. The burden on the internal IT team has also been vastly reduced, given the fact that the new infrastructure offers a centralised mechanism to make configuration changes. In addition, the network upgrade has mitigated risks associated with certain equipment being ‘end-of-life’ or ‘end-of-sale’. The new solution has boosted end-user productivity, and the number of complaints and help desk requests has dropped sharply.

At any point in time, a student can have up to six wireless devices, all acquiring IP addresses and connecting to the WLAN.
Enterprise mobility has added to the burden on today’s IT security professionals. The ease with which an endpoint device can be lost or stolen is a major additional consideration. Questions around the support and management of these devices represent a further headache.

To protect your business from risk, you need a mobile security strategy that’s integrated with your overarching governance, risk, and compliance framework. This will allow you to:

- entrench security into every mobile device, access method, and application
- determine which employees should be allowed access to which data, from where, and using which devices
- ensure these security efforts are enforced via the implementation of appropriate policies
Accelerating Towards Secure User Access

Secure user access is an operational competency; it’s all about providing users with access to the network and its resources. This access may be based on roles, business needs, and existing security policies.

In order to help you work out the maturity of your ability to provide secure user access, we’ll describe three possible maturity levels: basic, integrated, and optimised. With each level, you can replace reactive mechanisms with more proactive approaches towards meeting an optimised secure user access competency.

Basic capability
Basic capability here indicates that users are actually able to securely access the wireless network using their established network accounts. The use of wireless security protocols like WPA2 should be in place to ensure proper encryption, as well as integration with Microsoft® Active Directory for authentication. Some level of policy education and awareness is present around email, pin lock, and remote-wipe for mobile devices.

Integrated capability
An integrated capability goes one step beyond simply being able to connect to the network. User credentials also ensure that employees can access specific (and correct) applications, systems, and data on the network. For example, sales personnel will have access to the sales pipeline information and salesforce.com, but won’t have access to HR reports. Simply put, it’s about role-based, ‘intelligent’ access to applications. In addition, as there are multiple entry points, some type of wireless LAN (WLAN) intrusion prevention system should be in place, as well as a basic network perimeter solution (i.e. firewalls).

Optimised capability
An optimised capability would manifest itself in a seamless experience for the user, with a single sign-on for all mobile services, from any approved device. Users would also be able to move between applications across the organisation, obtaining data from different sources and carrying out actions that engage various systems. Such access ultimately allows users to perform their business functions optimally, regardless of their location.

Organisations at this level are consistent in considering network security a high priority. They make the commitment to put in place the necessary tools and technologies to ensure that the fastest possible network is also the most secure. This is accomplished using a combination of network perimeter security, a centralised security policy management system, WLAN sniffer technology to detect rogue devices and unauthorised use, and WLAN intrusion protection systems to enforce access policy.

Where are you?
Below are some examples of mechanisms within a secure user access competency. These will help you ascertain where you are in terms of your capability within this competency:

- Field employees can access transactional systems (e.g. product inventory and databases) from mobile devices without compromising sensitive data.
- Guests and partners have appropriate access when working on the premises.
- A network perimeter security solution, a WLAN intrusion prevention system, and rogue-device and unauthorised-user detection mechanism are in place.
- Mobile subscription access is managed per role requirements.
- You have single sign-on for all mobile services, from any approved mobile device.
- Security policies and mechanisms are aligned with the mobility strategy.
- A mobile VPN solution, or other encryption solution for remote mobile users, is in place.
Maintaining the Balance
Between User Experience and Security

To help protect the personal and professional data on personal mobile devices, mobile device manufacturers have implemented some basic security features, either through the hardware itself or through software implementations. For instance, PIN-based entry and device lock are fairly common on most, if not all, devices. In addition, a remote-wipe feature is very common among corporate-issued devices and is effective when the device is no longer in its owner’s possession.

Encryption alone is not enough
One place to weigh risk versus reward is when downloading and installing productivity, entertainment, and social applications. These usually require access to the device’s data or file system and may leave you open to attack. Advanced file or data encryption is usually necessary to protect against active attacks, but encryption alone is not effective when dealing with employee misuse or malicious insider threats. To adequately protect corporate data, you need to control which mobile applications can handle business data and actively restrict data manipulation operations like cut and paste. Defending against mobile malware will also become an increasingly important IT priority.

Information management
When addressing the security challenges brought on by mobile device proliferation within the corporate network, critical elements include how to provide effective governance, mitigate risk, and ensure compliance. This begins with an understanding of information management, or in other words, identifying which data is indeed sensitive or proprietary, and how policies can protect and handle that data accordingly. There should be governance and policy enforcement around whether that sensitive data is even allowed on personal devices, or if there is separation of corporate data from personal data on the device. Data protection and risk assessment are important drivers, and any compliance enforcement must be aligned with organisational guidelines.
Policy and procedure

Some level of written policy and procedure that incorporates mobile devices and the handling of mobile data must be in place for organisations to be effective at governance and compliance. These policies may revolve around the right for IT to manage any mobile device with access to corporate data, even employees’ personal devices.

The mobile policy needs to indicate which devices will be fully supported, partially supported, or not supported at all. For supported devices, you need to outline the minimum standards for security measures that can at least be implemented on the device (encryption PIN codes, remote wipe, etc.). Depending on the device’s ability to support these security measures, you may choose to disallow selected devices from accessing the corporate network altogether.

Finally, employee acceptance of information technology and mobile usage policies is critical to success. Employees must be made aware of official governance around the privacy of data, and the company’s right to monitor data while in the corporate network, and seize devices in case of investigations.

To adequately **protect corporate data**, you need to control which mobile applications can handle business data and actively restrict data manipulation operations.
# Secure Enterprise Mobility Global Survey Results

Dimension Data conducted a global survey of **1,622 IT professionals** in **22 countries** to assess the current state of security as it relates to enterprise mobility.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Mobility is a priority</td>
<td>79%</td>
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<tr>
<td>Have a mobility roadmap in place</td>
<td>31%</td>
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<tr>
<td>do not have a mobility roadmap</td>
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<tr>
<td>have a mobility roadmap</td>
<td>69%</td>
</tr>
<tr>
<td>Many roadmaps are missing critical steps that make implementation success less likely</td>
<td></td>
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<tr>
<td>Most do not have well-defined mobility network policies</td>
<td>71%</td>
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<td>have not completed an inventory of applications to test how well they work on mobile devices</td>
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<td>68% have not completed a security assessment of key applications touched by mobile devices</td>
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<td>Most can't use mobile devices to perform core job functions</td>
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<td>73% do not feel that their organisations have well-defined policies around mobility</td>
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</table>

**Start**

Dimension Data's Enterprise Mobility Development Model can get you back on track

**Dead end**

Dimension Data's Technology Lifecycle Management Assessment for Security can give you the visibility you need

Dimension Data's Enterprise Mobility Development Model can get you back on track
Mobility’s greatest benefit: increasing worker productivity

39% can access all critical applications on their personal mobile device to perform their job function.

79% believe mobility increases worker productivity.

61% are unable to access applications that are critical to performing their job.

You’ve arrived.

Dimension Data’s Enterprise Mobility Development Model can get you back on track.
The organisation was looking to manage its 
**capex and opex more efficiently** and hoped to support its new identity management infrastructure **without increasing its headcount.**

**Client:**
A Fortune 100 company

**Country:**
Global

A leading Fortune 100 company – with extensive operations across the globe – needed to make it possible for employees to interact with external partners by sharing a range of business systems and tools. This presented a challenge in that the organisation would need to provide business applications, collaboration, and productivity tools, and information and data-sharing to both known and unknown devices. The initiative would need to be rolled out across the business’s primary locations, centres of excellence, as well as remotely for mobile workers or those on site at collaborating partners’ locations.

The solution would need to identify users, client-owned laptops, desktops, personal and partner-owned PCs or Macs, and personal mobile devices. User- and group-based credentialing along with access control to approved systems and tools would be required to ensure appropriate access within the client’s virtual desktop infrastructure … without compromising access to secured locations within the network or systems.

With the client’s stated requirements top of mind, Dimension Data developed a customised solution, which comprised an innovative identity service and access control infrastructure. The solution provides secure, controlled access to both the wired and wireless networks at each of the client sites. The infrastructure can identify mobile users and devices and apply the appropriate access controls within both the network and the virtual desktop infrastructure. It also manages remote access and security controls independently for the company’s employees and guests.

As part of our multi-year managed identity service, we deliver 24/7 incident management, which includes technical support, patch management, configuration management, maintenance, MACDs, global maintenance with break-fix replacement, and service delivery management, all with committed service level agreements.

**Full services approach**

Dimension Data’s full services approach and close working relationship with the client meant we could deliver a solution that was tailored to its specific business requirements. This has enabled us to accelerate the client’s business efforts and longer-term operational goals, while negating its requirement to hire costly technical expertise to operate its new collaboration environment.

Thanks to the scalable and secure design of the platform, the client has improved its security posture and minimised the risks associated with rogue, unknown, or inadequately protected user devices. This means that concerns regarding the cost and reputational damage associated with a security breach are a thing of the past.
As your organisation looks to embrace mobility, it’s important to understand the impact this will have on both your business and your ICT environment. Your infrastructure needs to support all your business processes – both existing and new – from end to end.

You need to ensure you understand the full impact of mobility on your technology environment and the possible strain it may place on existing processes. To achieve true operational excellence, it’s likely that you’ll need to undertake a large-scale review of your existing operational processes and procedures. You may need to change and/or develop new ones to incorporate mobility aspects.

Embracing mobility means more than enabling personal device use. Enterprise mobility initiatives provide new interfaces to interact differently with employees, partners, suppliers, and customers. But many operational questions need to be answered.

Which applications will you support and which carriers should you use? How will you manage multiple supplier contracts? Ensure that policies are in place and enforced? Identify and mitigate risks in the shortest possible time?

Supporting new devices and new applications is not simply about the technology. Through mobility, new business processes will emerge. Ultimately, your goal should be to put in place a roadmap to transform your infrastructure through mobility, rather than simply make tactical adjustments to incorporate it.
IT services operations refer to the day-to-day management of the operations of any wired and wireless network component within the infrastructure. Proactive monitoring of the mobility-enabled infrastructure in order to prevent downtime, and being able to troubleshoot issues as quickly as possible, are important capabilities of this competency. Ensuring infrastructure elements are up and running to provide connectivity for users is a critical aspect of IT services operations.

This competency also includes the management of client devices connecting to the network. This is commonly referred to as mobile device management – an IT department’s ability to support various mobile devices on the network. Inventory and asset management are only the first steps of this capability. Many organisations tend to need more advanced device management that allows for deeper integration into their connected enterprise in order to deploy applications and/or allow policy-based access to back-end systems.

Levels of capability

Dimension Data defines three possible levels: basic, integrated, and optimised. With each level of maturity, you can replace reactive mechanisms with more proactive approaches to meeting an optimised IT services operations competency.

A simple description for a basic level of capability is network device level maintenance for the wireless infrastructure. To fall in this category, you would, at a minimum, be able to maintain devices. For example, if a wireless access point goes down, a user will call saying that they can’t connect, and action would be taken to fix the connectivity problem.

In addition, on the client device side, you would have basic inventory and asset management of the mobile devices interacting with your corporate network. This includes initial provisioning of a device where your organisation will want to ensure that basic certificates, policies, and device settings have been established to ensure proper initial device enrolment.

At an integrated level of capability, you’d have visibility within the infrastructure, most likely enabled via a wireless management platform. This is usually a software platform provided by the access point vendor which allows you to view alerts and determine which access points within the infrastructure have failed and need attention. This capability level further extends the use of the wireless management platform to enable monitoring for availability and event management, and ensures a more proactive approach to IT services operations and meeting service level agreements (SLAs). While problem management may still be reactive, proactive reporting to the business will be in place, as well as a service desk to provide level-two support.

The integrated level of capability also ensures the proper backup of data on mobile devices. Security policies and procedures should be in place for contextual device security, user- and device-level blocking via passcodes, the ability to encrypt data on the mobile devices, as well as the ability to remotely wipe and/or lock a device if it’s lost or stolen.

To achieve an optimised level of capability in this competency, other networks beyond the enterprise wireless network are covered by the support function. Business SLAs are managed across wireless, wired, and even mobile networks. While the connectivity delivered over the wireless network is paramount, there is a dependency on related systems and networks that can also impact business SLAs. Wireless doesn’t work in a vacuum, and to be truly optimised it needs to be fully integrated across other parts of the business.

**IT service operations competency**

Below are some examples of the IT services operations competency. These will help you ascertain where you are in terms of your capability within this competency.

- Wireless management platforms for basic control of wireless access points and controllers
- SLAs for wireless networks defined and agreed upon with business stakeholders
- Mobile device management for provisioning of security policy and configuration settings
- Maintenance and support agreements up-to-date and in place for all wireless infrastructure
- Proactive capacity planning and assessment of wireless and mobility infrastructure
- Regularly scheduled reporting of availability, performance, compliance, security, and inventory that will guide IT operations’ activities
- Expense, application, bandwidth, and usage management for mobile devices
As mobile devices continue to cross the corporate threshold, desktop virtualisation is increasingly being recognised as a powerful and enabling tool for change.

With the traditional ‘monolithic’ desktop, the applications, operating system, and user data are all tied to a specific piece of hardware. Virtualisation breaks the bonds between these elements into isolated layers, enabling IT administrators to change, update, and deploy each component independently for greater business agility and improved response time. End users enjoy the same rich desktop experience, but with the added ability to access that computing environment from a multitude of devices and access points.

Desktop virtualisation disengages the user experience and application functionality from operating systems, hardware, and software. By doing so, it removes the need for organisations to favour specific mobile devices above others and it means that organisations don’t have to rely on specific vendors to gain control of their IT environments.

Now, supporting remote branch offices, mobile workers, and home workers is also less of an obstacle, given the location independency of desktop virtualisation. You can sidestep many of the drawbacks of dispersion while reaping its benefits. With desktop virtualisation, extending access to corporate resources to temporary and unmanaged workers and third-party contractors and suppliers in a controlled manner is also much more feasible and secure. Administrators can assign rights and profiles based on users’ unique roles within the organisation and their respective task requirements.

**An example**

This capability recently delivered significant value to one of Dimension Data’s Australian clients. The organisation frequently engages the services of field contractors to assist in identifying and remediating electrical faults. The contractors’ remit includes visiting sites and taking photographs of faulty cabling, which are uploaded to a central server for diagnostic review. The contractors have their own laptops, yet need access to corporate information relating to the physical location of underground cables. Naturally, the need to ensure integrity and security of confidential corporate data represented a concern. Desktop virtualisation provided the answer to the dilemma.

Today, the organisation simply issues contractors with secure access to a virtualised application that can interact with local devices such as cameras and measurement equipment, from their own laptops. As the application is hosted in the company data centre, there is no resident data left on the contractor’s device once they complete the work.

In this way, the organisation has found a way to strike a balance between enablement and control, thanks to the power of desktop virtualisation.
Expense Management

Enterprise mobility creates a shift in the way that your business interacts with suppliers, partners, and vendors. And, as your employees increasingly make use of multiple devices to perform their jobs, the level of interaction with external parties will increase and become more complex to manage.

With this new model, you not only need to control mobile costs, your relationships with your communications providers also need to move beyond the purely transactional. If you can achieve end-to-end visibility of your communications infrastructure, processes, and information flow and costs, you’ll be in a stronger position to negotiate the best deals with your communications providers. You’ll also be able to make more informed, strategic sourcing decisions regarding which services you procure from different service providers.

In the pages that follow, we uncover practical advice and steps you can use to take control of your mobile expenses.

From expense management to Communication Lifecycle Management

Traditional expense management approaches may fall short as they focus only on the assets and services that reside outside of the network – which are primarily service provider costs. They also don’t consider the full lifecycle of communications assets and how to exploit new technologies.

Communication Lifecycle Management involves obtaining a view of the entire communication estate, both inside and outside the firewall. This can help you optimise routing, negotiate contracts, and manage disputes. It also involves streamlining internal systems and procedures across your own network to ensure they’re performing optimally and at the lowest possible cost to your business.

Benefits of this approach:

- On-demand information and a holistic picture of your communication estate empowers you to make informed decisions, contain costs, and support your organisation’s corporate strategy by selecting the right communication tools.
- Scheduled reporting and integration with data analysis tools help you to identify savings and optimisation opportunities.
- By eliminating incorrect invoice charges and highlighting billing anomalies to help reduce abuse, you can cut communications costs dramatically.
- You’re able to see where you’re over-subscribed, or are under-utilising infrastructure, pinpoint wastage and inefficiencies, and streamline your communications systems.
- You can facilitate centralised, more cost-effective procurement strategies.

Communication Lifecycle Management gives you visibility, order, and control of all communication assets, anywhere in the world. It allows you to make timely, evidence-based decisions about the entire communications network – not just bits and pieces of it.
Have you ever had a bill that you’ve been afraid to open? Perhaps you spent a lot of money while on vacation. Maybe you talked for more than 900 minutes on your cell phone last month and your overage costs 35 cents a minute. Whatever it is, we all know the feeling of avoidance that comes with a bill that’s just a little too big.

That’s exactly how most corporate telecom managers feel every month when the time comes to assemble the basic accounting for their companies’ mobile spending. The corporate bills come in, workers submit their expense reports, and then comes the arduous task of figuring out how much the company has spent on mobile telephony. This can be a time-consuming and costly activity, and many organisations find it difficult to scale the cost of managing mobility because of a lack of consistent policies, distributed purchasing decisions, and multiple bills from multiple carriers.

Dimension Data recently engaged its communications lifecycle management unit to analyse information collected from its database of clients in the US and suggest the six best ways to cut mobile costs in a corporate-liable device environment.

1. **Disconnect unused voice lines**
   Device underutilisation is proof that what you don’t know can hurt you. Our analysis showed that 25% of devices had less than 10% voice utilisation. There are multiple reasons for low voice use, including terminated employees, spare devices, employees with multiple devices, or employees who simply use other services such as messaging and data. Identifying these lines and validating them with terminated user employment status can quickly help identify lines to disconnect.

2. **Assess plan ‘wants’ versus ‘needs’**
   Leaving plan selection to what end users want rather than what they need can result in higher costs. Plans should be thoroughly reviewed in order to ensure cost-efficiency. One form of utilisation savings is through plan optimisation. This strategy is worthwhile, considering 67% of our corporate-liable device base showed up to 59% underutilisation. Plan needs should adapt to end-user behaviour changes.

3. **Assess international roaming plan value per user**
   In terms of international data roaming, organisations spent an average of USD 48.72 monthly per user. While international roaming plan fees vary across carrier by device type and data allotment, they can reduce international spend substantially. Consistently retaining the international plan with low travel will offset savings. Alternatively, organisations with tight budgets should never allow corporate lines to be used overseas without an international data roaming plan, owing to the risk of open-ended spending.

Dimension Data recently engaged its communications lifecycle management unit to analyse information collected from its database of clients in the US and suggest the six best ways to cut mobile costs in a corporate-liable device environment.
4. Don’t underestimate average annual download cost

<table>
<thead>
<tr>
<th>Avg. annual cost per device (USD)</th>
<th>Avg. monthly cost per device (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>47.30</td>
<td>3.94</td>
</tr>
</tbody>
</table>

Dimension Data’s research puts the average corporate-liable device download expenditure per device at around USD 3.94 per month, and just under USD 50 annually (Table 1). On the face of it, these figures seem low and it would be easy to dismiss them as insignificant. However, their threat to corporate overspending lies in volume, not price. These costs add up quickly when multiplied by the number of employees in a large organisation. It’s important for organisations to be aware of what they spend on download costs, and then to communicate to employees that these costs are being monitored and won’t be allowed to run rampant.

5. Validate all your device replacements

<table>
<thead>
<tr>
<th>Year</th>
<th>Device refresh %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>29%</td>
</tr>
<tr>
<td>2011</td>
<td>28%</td>
</tr>
<tr>
<td>2010</td>
<td>31%</td>
</tr>
<tr>
<td>Total</td>
<td>29%</td>
</tr>
</tbody>
</table>

As shown in Table 2, an average of 29% of all users either replace or upgrade a device each year. Yet, only 1% of those replacements are insurance-related. Users replace their devices mostly because they want to, not because they need to, and this causes unnecessary expenditure. Our advice is to introduce a policy which states that all replacements in a corporate-liable environment should be vetted and approved.

6. Consider engaging a telecom expense management partner

Telecom expense management creates greater visibility of telecom expenses – whether fixed or mobile, voice or data, local or global – across the organisation, through which proper management becomes possible. Telecom expense management collates all telecom invoices in a central repository, which allows you to verify invoices and properly allocate costs across all your business units.

It’s best if your telecom expense management service provider understands the complete IT environment and has an exemplary record in global execution for both expense management software and outsourcing services. If your telecom expense management effort is part of a larger communications outsourcing engagement, make sure to select a partner with proven consulting skills, integration expertise, and execution records in this field.
When dramatically escalating telecommunications costs pointed to possible fraudulent usage, platinum producer Lonmin quickly realised that its incumbent telephone management system was unable to provide the business intelligence needed to pinpoint the exact cause of the abuse.

Lonmin engaged Dimension Data to identify the root cause of the mine’s communication challenges and to offer the right technology tools to address these conclusively.

The solution involved a consulting element and the installation of Dimension Data’s AnalyZer solution to help Lonmin control and manage its telephony costs. The system currently monitors more than 3,500 users.

Far more than just ‘glorified itemised billing’, Dimension Data’s Communication Lifecycle Management services provide a valuable decision-making framework that enables Lonmin to understand and control its costs with a predictable expense model.

The solution extends to the provision of those management tools necessary for Lonmin to build a detailed overview of its communications costs. Beyond helping to recoup landline telephony, it also focuses on managing actual user behaviours, creating and analysing usage statistics with accuracy. These tools are enabling the mine to understand how and when spend occurs, and to bill communication costs back to identified cost centres.

Dimension Data audited the mine’s telecom expenditure, call patterns, and infrastructure, sourcing information directly from Lonmin’s networks and service providers and applied unique fact-based business intelligence to the data. We provided Lonmin with a presentation of our findings, which uncovered several prevailing behavioural trends impacting negatively upon the business in terms of uncontrolled spend, as well as productivity.

Working with Dimension Data, the mine has identified a strategy to contain costs in terms of infrastructure, management resources, and even supplier billing. The Communications Lifecycle Management solution is delivered and managed remotely as a cloud service, so the mine didn’t need to acquire any additional infrastructure or technology resources.

Swift return on investment

Many businesses might question an investment in telecom expense management, as many carriers offer the service as part of the package. For Lonmin, the value that telecom expense management was able to provide was realised from the very first month. By the end of the second month, the system had virtually paid for itself just from the reduced spending the business was able to achieve.

Informed decision-making

The insight and intelligence provided by Dimension Data’s analytical tools have added a great deal of value. Lonmin now has management insight into its communication environment and usage patterns so that anomalies can be identified and addressed in a timely way.

‘Through detailed and timely analysis and reporting on the use of our telephone systems we have been able to refine our telephony policies and procedures, implement corrective measures and change behavioural patterns, which has resulted in considerable cost savings.’

Tracey Honiball, IM Services Manager, Lonmin
Many organisations have successfully developed customised applications that streamline ad hoc workflow automation tasks such as leave or expense claim approvals. Others are exploring the latest functionality offered in ERP and CRM applications that allow them to customise the user interface according to the profiles and preferences of different employees. As your business looks to embrace enterprise mobility, you’ll need to determine which applications to mobilise – including value-add mobility applications and organisation-specific applications.

Is every mobile application worth implementing? You can determine this by weighing the value of various applications that enhance business processes against their cost and risk. A number of mobile applications hold potential to drive significant efficiencies within today’s business, if approached with the right strategic intent and supporting business process integration. There are, however, important considerations to bear in mind when developing your business application development strategy.

If your business doesn’t have a standard, integrated mobile device strategy in place, your mobile application strategy will inevitably be somewhat fragmented. In addition, by making mobile applications widely available, employees may consequently expect to be issued with mobile devices on which to use them. Remember, too, that the value inherent in applications is highly dependent on user adoption, so it’s important to ensure that employees have access to adequate support from the IT team after implementation.
Mobility is a game changer in the unified communications and collaboration (UCC) space. The goal posts have shifted … and will continue to do so. Today’s employees typically have at home, and in their pockets and handbags, better equipment and better access to better networks than you can provide for them at work. Employees are also extremely inventive about how they put their consumer technologies and applications to use in the workplace.

It’s not so much that users, through their increasing insistence on having what they know is possible, are driving IT policy in organisations; they’re actually also driving productivity and business performance, because they enjoy using their mobile devices … and the applications that they’ve identified as being the most useful to them. Employees are voluntarily taking on responsibility for providing better, faster, more effective service simply because they want to use their mobile devices. So, mobility isn’t a technological revolution. It’s a human revolution.

Instead of blocking or restricting the use of mobile devices and non-corporate-issued applications, organisations should be finding ways to allow the innovation inherent in these technologies and the innovation spill-over of users to flow through into their UCC execution to the benefit of the business.

A framework for user enthusiasm

If you’ve acknowledged that your organisation is, most probably, already mobile even if it has no field workers, what’s the next step in developing your UCC strategy? It’s essential to base the strategy on a structured framework of the technical and human implications that mobility holds for your organisation. The core implication of having users choose to use their mobile devices in highly individualistic ways, on behalf of the organisation, is that the business’s intelligence becomes mobile. This usually requires organisations that were avoiding knowledge management to finally embrace it. It also forces them to view all their knowledge-related activities, applications, and technologies through the lens of interconnectedness. For many organisations, mobility has seeped into the business through tactical solutions; few have come to mobility with a holistic, strategic vision from the outset. The results can be incomplete, piecemeal and, quite possibly, costly.

A partial solution is no solution

There isn’t a single aspect of communications and collaboration that isn’t affected by mobility issues. Not all organisations will have to confront all the issues of mobility, but all organisations will have to confront the issues relevant to their own operations. The point is that it’s vital to have a map. There’s more than one way to ensure that your UCC initiatives incorporate mobility as smoothly and cost-effectively as possible. But you can’t choose your route to that outcome unless you can make intelligent choices from the options available. It’s crucial to remember, too, that a UCC mobile strategy is far more than simply locking down the devices, applications, and usage your organisation doesn’t want. It’s about enabling your organisation to be more productive.

Ultimately, the greatest returns will come to those businesses with the foresight to plan early and that consider mobility to be, not just another technology, but an opportunity for business improvement, advancement, and agility.
Putting Business Applications to Work

Today, a growing number of organisations are using mobile business applications to drive productivity, automate business processes, and simplify a range of daily tasks performed by both ad hoc and advanced application users. In addition, many are developing and making available bespoke applications to their customer base in an effort to better meet evolving customer expectations, grow revenue, and sharpen their competitive edge.

For example, Euricom, a Dimension Data company, recently developed a mobile application for one of its financial services clients, a personal wealth management company. The organisation’s customers expect to have secure access to information regarding their investments, savings, and loans 24/7, via their mobile devices. Euricom developed a Web-based application that not only delivers this functionality via an intuitive and user-friendly interface, but is also able to import real-time external data, such as share prices and exchange rates. This has enhanced customers’ ability to manage their assets at any time, from any location.

Euricom also recently developed an innovative application for a leading distributor of pharmaceutical products in Belgium. The distributor’s sales team had been using a paper-based administrative system – an ineffective and time-consuming arrangement. Euricom developed an iPad application, known as ‘SharePad’, which is linked to the distributor’s back-end Microsoft® SharePoint infrastructure. It enables all information regarding pricing, orders, sales deliveries, and payments to be synchronised automatically. Euricom also created a management console within the application which allows the distributor’s sales and marketing managers to control which information is pushed to the iPad application, on a real-time basis.

The potential for business applications to boost productivity, enhance the user experience, and grow your market share is significant. However, there are a number of fundamental differences between business and consumer applications that you need to recognise in order to derive maximum benefit from your business applications and keep risk at bay.

Business applications – standard or customised – need to be secure in order to ensure that your corporate information isn’t compromised. This includes the requirement for a user login, ideally one that’s linked to a corporate-wide, single-sign-on infrastructure.

Deploying business applications is very different from deploying consumer applications. A popular approach is to develop a private, branded enterprise app store to store custom and standard business applications as well as business-relevant consumer applications.

It’s not uncommon for IT teams to resist the notion of introducing custom and mobile business applications; often this is due to their lack of experience in this area. This can lead to internal conflict, as business unit heads put pressure on the IT function to meet their requirements for such applications. IT teams that find themselves in such situations would do well to engage the services of a seasoned business application development partner to help them steer their course and develop an actionable mobile application strategy.

The future of business applications looks bright. Enterprise applications will increase the level of interaction among employees and even customers as they share greater amounts of data with one another, using connections to cloud-based Web services. The days of long-term, high-cost software projects (a high percentage of which typically fail) are also numbered. Increasingly, businesses will opt to develop greater volumes of smaller applications – each of which is targeted at a specific set of users within the organisation – and use a cloud platform to distribute the applications and the data within them.

About Euricom

Euricom builds custom software for all business, provides co-source .NET specialists for all sectors and creates mobile apps for all devices and platforms. Euricom is a Dimension Data company. For more information, please go to www.euri.com
Business and custom applications development can be a double-edged sword. While these applications hold potential to enable your employees to perform their jobs more effectively, your development efforts need to be carefully planned, coherently executed, and regularly revisited. Britehouse, a Dimension Data company specialising in this area, offers its clients the following advice:

1. **Focus on the business opportunity**
   When setting out to define your enterprise mobile application strategy, start by looking at the business opportunity, rather than the technology. What are you aiming to achieve? What benefits are you hoping to gain? Don’t be dazzled by all that’s ‘shiny and new’. IT leaders should guard against being drawn in by the latest device releases and the features and functions they offer. Technology is simply an enabler of your enterprise mobility vision.

2. **Existing functions are easy wins**
   Begin by looking for opportunities to leverage mobility to perform existing functions in different ways. Don’t define success solely in terms of creating something ‘big and new’. Sometimes the simplest things – like mobilising your time sheets or the process for approving leave – can have a significant impact on your business … and jump-start your entire enterprise mobility strategy.

3. **Architect for change**
   Design your application strategy to embrace change – technology typically becomes obsolete every 12 months. Your strategy needs to be geared to embrace continual technology refresh cycles. As you design, build, and integrate enterprise mobile applications into your business, take heed of consumer behaviours and preferences. These should define and drive what applications you mobilise in your business, and how you mobilise them.

4. **Integration is key**
   While it’s tempting to focus your attention solely on the applications and the capabilities they promise to deliver, if your mobile application solutions aren’t thoroughly integrated into your environment, the outcomes may not live up to your expectations.

5. **Focus on the user experience**
   Today, there’s a strong focus and awareness on the part of users of mobile applications and the functionality they deliver. Understand what users are looking for and engineer your applications from the outside in. Looking ahead, there’ll be a blurring of the lines between mobile and Web applications.

6. **Policy defines organisational behaviour**
   Developing and enforcing policies is critical to putting in place a sound governance structure and defining the way your business users embrace enterprise mobility applications, now and in the future.

7. **Enterprise mobility is a journey**
   Recognise that, because enterprise mobility is a horizontal thread in your business and has multiple touchpoints across the organisation, it’s not something that can be mastered overnight. As it holds exciting possibilities for your business to evolve and grow, it needs to be driven with the same level of rigour and discipline as any other business strategy. An enterprise mobile application strategy isn’t just the concern of IT. Development, awareness and ownership of the strategy should reside in all areas of business.

8. **Ecosystems, not endpoint enablement**
   Enterprise mobile applications shouldn’t provide stand-alone, point-in-time capabilities to users; instead, they should enable users to participate in larger ecosystems within the business.

About Britehouse
Britehouse is a portfolio of leading business process automation companies offering application and data solutions through a range of business models and technologies to large and mid-sized African business. Britehouse offers services and solutions which integrate across leading SAP and Microsoft technologies. Britehouse SSD (Pty) Ltd is an SAP Africa Service Alliance Partner and 3fifteen Technologies (Pty) Ltd is a Microsoft Gold Partner. Britehouse is a Dimension Data company.

For more information please visit [www.britehouse.co.za](http://www.britehouse.co.za)
In developing their organisation’s unified communications and collaboration (UCC) strategy, only 20% of decision-makers report that users contribute significantly. This is highlighted in the Dimension Data 2013 Global UCC Study. The study, which was carried out by research firm Ovum on behalf of Dimension Data, polled over 1,320 enterprise ICT decision-makers and 1,390 employees in a broad spectrum of industry verticals in 18 countries.

Decision-makers report that line of business managers, local managers, and users are frequently consulted for UCC investment planning, with over half the organisations conferring with each of those stakeholder communities. This is relatively good news, until enterprises are asked whether such stakeholders make a major contribution. The answer is that they don’t: as expected, IT managers and WAN managers are the most influential. Over 70% of enterprises make a UCC investment relying on global IT directors for major contributions; less than 20% receive major contributions from users. UCC decision-making, especially as the breadth of technologies and services expands, is not a zero-sum game.

IT directors and managers should be making major contributions, but it seems organisations aren’t taking user and line-of-business feedback as seriously as they could be, increasing the risk that UCC investment won’t be matched by employee uptake. There’s a great deal of risk inherent in not granting significant weight to user expectations and requirements, since the research also indicates that user uptake is a critical success metric for UCC investments. A user-aware, or even user-centric, UCC strategy implies that these requirements help shape UCC investment strategy. In the future, users will increasingly be the catalysts for evolution in the UCC market.

To find out more about the Dimension Data 2013 Global UCC Study, please visit http://www.dimensiondata.com/global/solutions/ucc/index.html
Case Study – Mobile Solution Optimises CTM’s Shop Floors

Client: CTM  
Country: South Africa

With close to 100 stores countrywide, CTM – an Italtile subsidiary – is South Africa’s largest specialist tile and bathroom retailer. CTM faced many challenges owing to the heavy, bulky and immovable nature of the products it sold to customers. Its shop floors are used mainly to display samples, with actual stock kept in back-end storage areas. The implication is that sales staff guiding customers through the heavily consultative decision-making, pricing, stock-checking, and sales process had no immediate view of available stock levels in-store. A complicated sale covering a range of products and elements would therefore be time-consuming to conclude. The salesperson would often need to write down product barcodes, and scurry back and forth between the customer and a fixed point-of-sale computer to check availability and price.

Eliminate human error; enhance customers’ shopping experience

In addition to cumbersome sales, CTM was also challenged by inefficient stock-checking processes. These were heavily dependent on the accuracy of manual counting and data comparisons, which were time-consuming and carried a high risk of human error. Most importantly, CTM wanted to find a way of boosting its customers’ overall shopping experience while they conduct business in-store, ensuring greater speed, accuracy and customer satisfaction.

CTM approached Britehouse, a Dimension Data company, which assisted CTM to select an appropriate handheld device that would best serve its mobility needs. The criteria were that the devices should be robust enough to handle everyday use by sales staff, incorporate a built-in scanner for quick and easy barcode scanning, offer a variety of useful supporting functions, and integrate seamlessly with the business’s back-end SAP system to form an end-to-end point-of-sale solution.

Fast, accurate and efficient stock-taking

The selected mobile point-of-sale devices use infrared technology for barcode scanning, which also enables them to be used for fast, accurate, and efficient stock-taking and spot checks. They accurately track and display all stock levels in real-time – both in-store, and in other nearby stores should the stock be unavailable in the customer’s store of choice. No data is kept on the devices themselves, as they’re connected to CTM’s back-end infrastructure via a private Wi-Fi network in each store. This is to guarantee always-on connectivity, even in the remotest of store locations where national cellular networks aren’t always reliable. The devices can either print out a full and detailed quote for the customer by connecting wirelessly to a nearby printer, or process the transaction immediately by connecting to a credit card machine in-store. Once the transaction has been processed, packing, delivery and collection specifications for various products are communicated to the warehouse where the stock is kept, completing the end-to-end sales process.

The mobile point-of-sale solution has brought significant business benefits in terms of optimising CTM’s shop floor. The use of the new handheld devices has resulted in a 50% increase in sales volume handled by each salesperson thanks to the time efficiencies and on-the-go stock- and price-checking capabilities. Stock-taking processes have also seen a massive 80% reduction in time required to complete, plus greater data accuracy due to fewer human errors. With this solution as the first of its kind in South Africa, CTM holds a competitive advantage over its peers in terms of providing customers with a more efficient and streamlined shopping experience.
Businesses across the world are beginning to appreciate the potential of enterprise mobility to accelerate the achievement of their core strategic objectives … yet many remain unclear about how to ensure they harness these possibilities effectively. Integrating enterprise mobility into your business is a journey, rather than a destination. You need to understand where you want to be, and what you want to achieve, in relation to your own individual roadmap.

Also, mobility isn’t just about a device or its management. Today there are stronger trends coming into play, including more user-centric computing models and as-a-service constructs. Like with other aspects of ICT, organisations are now exploring how they can consume the various enterprise mobility solution components in just the right amounts, at just the right time. By aligning supply of these components more closely with internal demand, you’ll not only reduce costs, but also become more responsive to end-user requirements. However, achieving the ‘enterprise mobility as-a-service’ nirvana calls for careful planning and coherent execution, and involves decoupling the user from the device and from the data, incorporating more self-service capabilities, and effectively exploiting cloud models.

Dimension Data has developed the Enterprise Mobility Development Model in order to assist its clients in charting a way forward. The Model enables organisations to assess their current maturity in enterprise mobility across the six Enterprise Mobility Framework areas we’ve covered so far and to assist them in planning a roadmap to increase that maturity.
Dimension Data has performed an extensive number of mobility assessments across all regions. Upon reviewing and collating the results of these engagements, we discovered a consistent set of capabilities needed by over 80% of clients. Further evidence of the challenges our clients face in embracing mobility has been uncovered through Dimension Data’s investigations as part of the Network Barometer Report, commissioned research and early benchmarking from the Model itself.

**Key findings include:**

- In 2012, 67% of all devices carried at least one known security vulnerability, down from 75% in 2011.
- The percentage of devices in risky late-stage obsolescence more than doubled in 2012.
- UK, Spanish, German, and Chinese companies have the most immediate plans for bring your own device support.
- In emerging markets such as Brazil, China, India, and South Africa, more than 70% of employees who own a smartphone or tablet report using it for work. However, less than 30% of enterprises say they support employee-owned smartphones or tablets.
- 22% of large enterprises report plans to roll out mobile unified communications within the year.
- User understanding of mobile unified communications is markedly lower (58% not heard of) than decision-makers believe (85% say users are somewhat familiar). This highlights a need for user consultation and profiling and a likely increase in the influence of users on mobility planning.

Mobility implementations tend to extend across a number of functional and technology areas. They require the orchestration of a number of interrelated and interdependent technical components, processes, and policies in order to address end-user requirements.

### Top 20 Questions to Ask Yourself When Charting an Enterprise Mobility Journey

Developing a comprehensive and actionable enterprise mobility roadmap means factoring in both business and technology considerations. In undertaking its Enterprise Mobility Development Model assessment, Dimension Data works with clients to answer a number of key questions in order to accurately gauge the organisation’s current state of enterprise mobility maturity – and how it wants to evolve. In preparation for the workshop, clients are asked to consider their answers to some of these questions:

#### Business questions

- What business benefits do you believe enterprise mobility could unlock for your organisation?
- What processes do you wish to transform or remove by utilising mobility?
- What does mobility mean to you?
- What are your high-level motivations or pain points?
- What’s the profile of your workforce (i.e. number and location)?
- What percentage of your workforce is mobile?
- What type of mobile users will be accessing systems?
- What policies are in place to support mobility?

#### Infrastructure questions

- What is the nature of your current network and security infrastructures? Do they support your mobility requirements?
- Describe your current and desired application infrastructure?
- What progress, if any, have you made in embracing mobility?
- Have you deployed any mobility solutions? How successful have these been?
- Do you currently provide support for bring your own device scenarios?
- What’s the expected usage for mobility services? For what percentage of their time will users leverage this service?
- Is secure collaboration a requirement?
- Will the mobility solution be integrated with your current environment or should it be segregated?
- With which existing technologies should the mobility solution be integrated?
- Do you have an existing public key infrastructure solution?
- Do you use Microsoft® Active Directory as your organisation’s directory service?
- Is 802.1x or network access control in use or under consideration?
Case Study – Research Institute Joins the Mobile Movement

Our client is a research institute of a prominent academy of arts and sciences, based in the Netherlands. Research at the institute focuses on developmental biology and stem cells.

Connectivity expectations

The institute is expanding fast. More and more research groups and students are making use of its facilities, all of them bringing their own equipment and devices. Previously, mobile devices were only permitted to make use of the guest Wi-Fi infrastructure. This put the infrastructure under pressure and it was fast reaching its capacity limits. While guests could generally still achieve reasonable connectivity, they had higher expectations: when they perceived the Wi-Fi to be too slow for their particular needs, they’d plug their laptops into IP wall sockets to get faster IP connectivity.

The institute requested Dimension Data to review its infrastructure and propose a solution that would allow visitors to connect to the wired infrastructure from their own devices, while ensuring that the institute’s security posture wasn’t compromised … all with minimum burden on the IT department.

Multiple mobility touchpoints

Dimension Data undertook an Enterprise Mobility Development Model assessment for the institute. The Model allows clients to plot their current and desired state across a number of competencies related to enterprise mobility. The engagement provided the institute with a framework to guide the implementation of enterprise mobility across the business, ensuring architecture alignment, and the integration of systems and business processes. While Dimension Data initially focused on the wireless infrastructure, it became clear that a number of related elements needed to be evaluated and addressed. Activities also included discussions with key stakeholders to ensure that the business needs and strategic goals in relation to enterprise mobility were thoroughly captured.

The application of the Model allowed the institute to plot its current and desired state across six core competencies associated with enterprise mobility: users, devices, networks, adaptive security, operations, and applications. Each was ranked according to its respective maturity levels – either basic, co-ordinated, integrated, or optimised.

Based on the review of the existing infrastructure and responses gathered from stakeholders – and a comparison of these to industry benchmarks – the institute’s existing maturity was deemed to be between a basic and coordinated level. However the institute’s desired ‘to-be’ state in the near- to short-term was fully coordinated. To assist the institute in realising this objective, Dimension Data proposed the following steps:

• implement a policies-based network access control solution spanning both wired and wireless networks to provide security and user segmentation, irrespective of the method of access
• expand the access switch capacity with more ports to allow for the institute’s wall sockets to be patched. Allowing guest-owned devices to make use of the wired network devices relieves the burden on the wireless network
• upgrade the wireless network – several components were already, or would shortly be, past their end-of-sale date
• transfer the responsibility of telephony to the IT department
• deploy Microsoft® Lync to replace the existing PBX system which used its own patches; with a modern voice-over-IP solution managing the patch infrastructure becomes much simpler
• make use of certificates to identify company-owned devices on the network

The enterprise mobility roadmap that Dimension Data delivered has enabled the institute to set clear short- and long-term goals.
A Word on Sustainability

No discussion on the subject of enterprise mobility would be complete without a mention of sustainability. Allowing employees the flexibility to work from home, or to be more productive while travelling, can reduce energy consumption and the need for real estate. What’s more, embracing mobility will give you the edge when it comes to attracting and retaining young, up-and-coming professionals who expect to enjoy more flexible working styles.

In this final section, we explore how sustainability fits into the enterprise mobility matrix.
Today’s Top Talent Demands Mobility and Sustainability

Ask any savvy manager about some of the greatest business challenges today, and finding and retaining talent will often top the list. Employees or potential employees now bring their own list of job requirements to a company, such as wanting access to collaboration tools and flexible working arrangements. For many candidates, an employer’s ability to demonstrate that it operates in a socially and environmentally conscious manner is high on the agenda.

The challenges don’t end when you’ve found the resources: you’ll need to convince people to join your organisation and develop and grow with it. If a potential employee has the skills you’re looking for, you can assume that he or she is being inundated with recruiter calls or exposed to a variety of Web-based job options. To win new talent, organisations must engage innovative ways of attracting and keeping employees. In this article, we’ll explore some of these tactics.

From telecommuting to teleworking

Telecommuting is not new. Companies have been giving people the option to work from home for some years, in a move to promote a better work-life balance, and save on the environmental and financial cost of commuting. But the days of expensive ISDN lines to access the corporate database, and complicated call redirection to forward work calls, are gone.

In the past, employees could work from home only a day or two a week without losing productivity. Today, entire teams can be home-based or dispersed among various geographic locations with no reduction in efficiency. The positive effect on employee morale and the reduction of the company’s carbon footprint can be dramatic. The word ‘telecommute’ referred to working via the telephone, using a modem. Today’s remote worker is more than a telecommuter: he or she is a teleworker, and can have face-to-face interaction with colleagues and clients, access to all the corporate information available in the office, real-time conversations with co-workers on secure instant messaging programmes, and collaboration through Web-based presentation-sharing platforms.

A teleworker can work in an office or at home, and there’s almost no difference in the way the work is done. Collaboration tools can help you select talent because of their skill sets and not simply their location – all while encouraging a healthier work-life balance for your employees. Collaboration tools can also help make your existing ‘road warriors’ – such as sales teams and engineers – more efficient. These tools allow access to all the information available in the office while they’re visiting a client, travelling by train with Wi-Fi, or by road, selling for your organisation. When collaboration tools are implemented fully, your workforce can expand and truly become a teleworkforce.

Reduce energy consumption … and the need for real estate

Allowing employees the flexibility to work from home, or to be more productive while travelling, can reduce energy consumption and the need for real estate. Allowing people to work from home also lowers the number of cars on the road, thereby reducing exhaust gasses and easing the traffic load. Large campus environments can shrink into more manageable and flexible workspaces. The production floor and technical labs will never go away, but you now have the ability to consolidate workspaces by making space more generalised. A hot desk in an office can serve as a station for a remote workforce with a single phone that allows assigned extensions to be entered – replacing the number of phones you need and the amount of wasted energy.

Meetings made simple

Businesses require seamless interaction between employees in order to run their operations as smoothly as possible. Sustainability is not just about cutting back to help the environment, it’s also about putting the tools and systems in place to achieve long-lasting reduction of travel, energy, and waste. To create a truly mobile workforce, you need to have tools in place to replace meetings. Different meetings have different requirements, but the maturity of collaboration tools now available makes moving to a mobile workforce easier.

Ad hoc one-on-one meetings, scheduled group meetings, or large one-to-many presentations are easier with these tools, so it’s important to understand how you meet.
Historically, ad hoc one-on-one meetings entailed picking up the phone or walking into someone’s office. Today, presence functionality allows you to see if a person is available, to send an instant message and ask a quick question, or to escalate to a phone or video conversation, regardless of location. Working becomes more efficient, and time waiting for responses is cut, and it’s all done with a few mouse clicks in the corporate directory.

Scheduled group meetings used to involve booking a conference room and gathering together in one location. Employees out of the area either missed the meeting, or were forced to travel to it. Today, we can schedule meetings online, send agendas, and share documents prior to the meeting. We can still gather in a conference room, but now others can join in virtually and participate wherever they are via video from their computer, which integrates seamlessly with the video facility in the conference room. When you need a more formal meeting and want the advantage of ‘life-size’ participants, high-definition audio and video and lifelike face-to-face conversations can take place through an immersive telepresence system.

One-to-many presentations used to be prepared well in advance. Organisations often hired third parties to prepare, manage, and monitor these presentations. These services were expensive, and, as a result, were used sparingly. This has all changed with desktop telepresence units and Web-based presentation applications that make this process much simpler and far less expensive. With just a user licence or webcam, an employee can set up, launch and conduct a presentation to a very large audience, with little effort. The same tools can be used to record planned presentations that can be uploaded to the corporate intranet and viewed by employees in their spare time using the device of their choice.

The meetings described above don’t require travel – that is, taking time out of the workday or employees’ personal time and causing the business to create more damage to the environment. What’s more, a global workforce often means that meetings are not facilitated during normal business hours for some of the participants due to time zone differences. To have a truly global organisation, the convenience of being able to get in touch with others in a variety of ways and from a multitude of locations is vital. With the appropriate technologies, each meeting type can be more effective and less expensive.

The tools of the trade
The right systems and tools available today aren’t difficult to deploy. However, ensuring that these tools work together to empower a remote workforce, and reduce cost and carbon footprint, is imperative. Depending on your level of interaction between employee groups, clients, vendors or analysts, you can choose to implement a complete solution, or pieces of it. So, understanding your needs is important. Start with a business-level roadmap session. Define your current and expected end state. Then define in more detail the way you communicate internally, while identifying collaboration tools that can improve these interactions. Finally, create an implementation plan that includes adoption management throughout the process.

Sustainability is not just about cutting back to help the environment, it’s also about putting the tools and systems in place to achieve long-lasting reduction of travel, energy, and waste.