



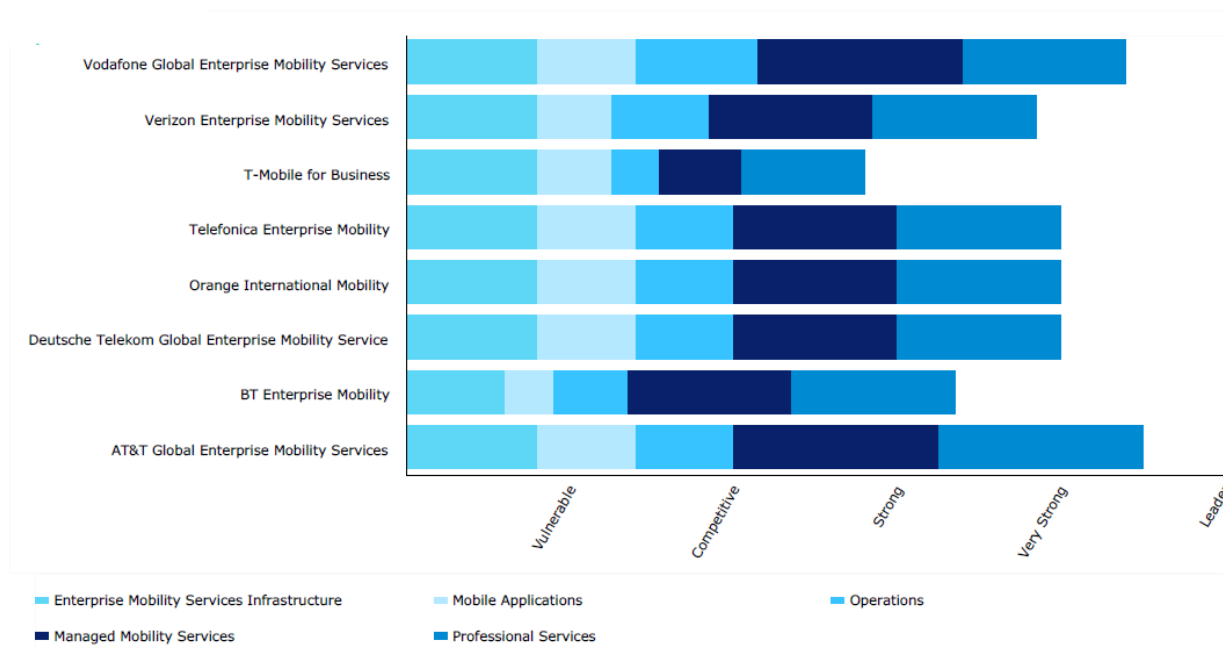
**KATHRYN WELDON**

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# **Global Enterprise Mobility Services: Competitive Landscape Assessment**

# Product Class Scorecard



## Market Overview

<b>Product Class</b>	Global Enterprise Mobility Services
<b>Market Definition</b>	Global enterprise mobility services are offered by telecommunications and IT service providers to businesses to enhance their ability to leverage mobile technology for internal and external communications, remote data access, and mobile applications. As smartphones and tablets have increased enormously in processing power, and wireless communications have increased in reliability and speed, enterprise mobility has become a mainstream but still very important element of service providers' portfolios. Services designed to attract and retain global business customers that are increasingly dependent on mobility have produced a very competitive market. In addition to enterprise-focused voice and data plans and devices, service providers offer mobile productivity tools, security, application development and enablement, consulting, managed and professional services, and other enhancements to ensure differentiation. 5G, edge computing and new services such as FWA and mobile private networks have energized the market.

<b>Rated Competitors</b>	<ul style="list-style-type: none"> <li>• AT&amp;T</li> <li>• BT</li> <li>• Deutsche Telekom</li> <li>• Orange Business Services</li> <li>• Telefonica</li> <li>• Verizon</li> <li>• Vodafone Business</li> <li>• T-Mobile</li> </ul>
<b>Additional Competitors</b>	<ul style="list-style-type: none"> <li>• DMI</li> <li>• Mobi</li> <li>• Stratix</li> <li>• Vox</li> </ul>
<b>Changes Since Last Update</b>	<ul style="list-style-type: none"> <li>• <b>December 2022:</b> In 2022, Vodafone Business disclosed it had updated its Red Tariffs and DLM service with support for new services, devices, and sustainability initiatives. Vodafone also added to its Mobile Private Networks with Collaborative Worker, Safe Worker, and Augmented Worker programs which bundle hardware, software, and connectivity for particular use cases.</li> <li>• <b>October 2022:</b> AT&amp;T confirmed it had launched 12 5G 'Edge Zones' across the US by end-2022. These zones will help to enable the next generation of network services.</li> <li>• <b>September 2022:</b> T-Mobile introduced AIS, a suite of ready-to-deploy solutions for municipalities, retail, manufacturing, and logistics businesses that includes connectivity, compute, devices, and applications.</li> <li>• <b>September 2022:</b> Verizon Business and Visionable, a UK-based health tech company, announced an expansion of their partnership into the US. This will enable them to work on a range of connected healthcare solutions via Visionable's technology powered by Verizon's 5G Ultra Wideband and 5G Edge network.</li> <li>• <b>July 2022:</b> Telefónica Tech and Telefónica Global Solutions are collaborating with Sateliot, a satellite telecommunications operator, for a connectivity service with dual 5G NB-IoT technology. Sateliot's satellite network will be integrated with Telefónica terrestrial NB-IoT networks to offer IoT connectivity wherever customers need it, including maritime clients.</li> </ul>

- **May 2022:** BT and Ericsson announced a multi-million pound partnership to provide commercial 5G private networks in the UK. The deal targets businesses and organizations in sectors including manufacturing, defence, education, retail, healthcare, transport, and logistics.
- **May 2022:** Orange Business Services launches the "Re" initiative in Europe, based around four pillars: recycling, returns, refurbishment, and repairs. The goal is to raise public awareness of the environmental impact of mobile phone recycling, and give a second life to mobile equipment, consolidating Orange's commitment to the circular economy.
- **January 2022:** Deutsche Telekom and Ericsson have extended their campus network alliance. DT now also offers location-specific 5G mobile networks for companies based on 5G standalone technology (5G SA). The campus network offering is based on local 5G infrastructure that is exclusively available for the customer's digital applications.

## Market Assessment

Enterprise mobility services have been a mainstay of service provider portfolios for over 15 years. Core capabilities (i.e., mobile devices, lifecycle management, mobile device management, enterprise voice and data plans, device- and application-level security management, application development/enablement, telecom expense management, and business and technical consulting) are table stakes. Service providers generate substantial revenues from enterprise mobility, and services need to remain fresh and relevant. 2022 stood out as a time when new connectivity options became more widely available, including public and private 5G; edge computing for low latency and workload optimization; integration of wireline security operations with UEM; initiatives linking sustainability with device lifecycle management, and fixed wireless access (FWA) for businesses. Mobile private networks continued to gain traction, with new reference customers, use cases, and vertical opportunities.

What's New in the Market? In 2022, the legacy focus on UEM, TEM, third-party mobile applications, and enterprise tariffs, shifted to include sustainable device lifecycle management services, as well as 4G/5G private cellular networks, along with edge computing, and enterprise FWA.

It is hard to call out a leader in enterprise mobility, as operators may excel in some areas but have relatively smaller footprints and fewer customers. Operators focus on their main geographical markets and aren't necessarily competing with each other across regions. Some focus on custom solutions for MNCs while others offer standardized services. Many operators are intent on drawing more SMBs/mid-market customers to their mobility portfolios. Some generate the most revenue from complex solutions in which mobility may be a small part, with less revenue from offerings that depend on reseller agreements, such as MDM or TEM. UEM may even be left to partners, and viewed as a pure resell option, with optional managed or professional services. Most service providers have also bundled mobility with other strategic services such as cloud, UCC, app

development, big data, and IoT, offering multiple services with technical interdependencies; this makes it difficult to evaluate mobility traction in isolation.

There clearly remain areas of growth. While UEM is now table stakes, mobile security solutions for identity management and real-time threat management continue to grow, in alignment with managed security for fixed-line offerings. Many service providers have streamlined enterprise mobility portfolios, for a simpler and easier to buy solution set. End-to-end vertical packages and productized consulting deliverables appeal to businesses trying to assemble the pieces to custom-fit their requirements. The view of enterprise mobility as a driver of digital transformation, along with other capabilities such as data analysis, IoT, and unified communications, is a common theme among service providers. Enterprise mobility has been energized by private wireless network opportunities, and by the launch of 5G, which, along with multi-access edge computing, has the power to enable innovative solutions that power high bandwidth, low latency use cases of the future.

## Market Drivers

- **Service Convergence:** 5G/MEC, enterprise mobility, IoT, and private networks are increasingly linked, with consulting and services groups often responsible for multiple areas, and technical solutions that provide visibility, management, and app enablement for multiple segments. Security operations and managed services are finally “embracing” mobility as a peer access method which requires just as much, if not more, assurances that confidential mobile data will not be stolen and exploited.
- **EM and Digital Transformation:** Managed mobility is often not a discrete offering within telecoms portfolios. Rather, it has been baked into strategic offerings, often combined with a larger set of digital transformation capabilities that include big data analytics, UC, cloud services, IoT, and application management.
- **Focus on User Experience:** Service providers are on a quest to make the enterprise mobility user experience more consumer-like, while securing and hardening it behind the scenes. The BYOD phenomenon was an early example, but the quest has expanded to user interface technologies to help companies offer B2C applications, self-service options, managed services, easy onboarding, and e-SIM management.
- **Service Portfolio Restructuring:** Many service providers have removed complex or overlapping plans and services from their portfolios. Bundling of what had been standalone offerings, or tiered services ranging from basic to more feature-rich solutions help streamline portfolios. Providing direct access to third-party platforms and applications makes it easier for companies to buy mobility services without eroding operator margins.
- **5G Disruption:** 5G is still growing in importance but has energized the enterprise mobility and IoT markets with the promise of innovative use cases. Mobile private networks have emerged as a major immediate opportunity, and the low latency and high bandwidth of 5G, plus edge computing and network slicing, will make it a disruptive technology.

## Buying Criteria

- **Partners and Footprint Fundamental:** Service providers need to pick a range of high-impact solution and platform partners to cater to different requirements. Footprint remains a key decision-making factor for customers' global deployments, with operators responding with partnerships and roaming agreements.
- **Managed Mobility Matters:** A comprehensive managed mobility portfolio remains important to customers, and generally includes mobile device management and other security offers, telecom expense management, app enablement, and device lifecycle management.
- **Operations Key to Customer Productivity:** Service providers must be able to relieve customers of time-consuming processes such as kitting, staging, testing, moves/add/changes, and device end of life management.
- **Mobile Apps are Essential Tools:** Businesses may do their own app development but many count on operators and ITSPs to provide custom development, a range of self-help development tools, and/or third party "pre-shrunk" apps for particular processes or verticals.
- **Professional Services are Key Differentiators:** The service wrap is a key value-add in engagements for commoditized services such as MDM and TEM. The ability to provide advice on and procurement of mobile devices, apps, security, and BYOD plans relieve customers of the hassle of juggling disparate platforms and services.

## Vendor Recommendations

- **Spread Out:** Operators with their own wireless footprint are often favored for global deals. The next best thing is a set of strategic partners that extend their footprint and use the same core management platforms and expense tools. Joining a formal alliance like FreeMove takes care of many of these kinds of problems.
- **Throw Out the Old:** Adding platforms may result in a set of redundant and confusing offers that are difficult to buy and sell. Rationalization and restructuring of mobility portfolios into a simpler, logical, easy to understand product set is good practice. Self-service options and dashboards, device self-enrolment and other ways to improve the customer experience are becoming mainstream.
- **Replayable Solutions:** Customers may sometimes need custom applications and services but service providers benefit from standardized, productized, repeatable offers that provide recurring "as a service" revenues to businesses with common processes or the same vertical focus. A new focus on SMBs by many operators makes this even more important.

## Buyer Recommendations

- **End-to-end Benefits:** Businesses often start out buying different software solutions from specialists only to find that they don't interoperate and the management overhead is significant. Using an integrator, ITSP, or global operator may provide both cost- savings and more interoperable solutions.
- **Out-Tasking Logic:** Service providers generally provide outsourcing options so that businesses can keep control of what they deem important or proprietary but can offload the headaches of logistics and operational management to a trusted third party.
- **Private Network Benefits:** Industrial sites such as factories, ports, airports, mining, and oil and gas fields are good candidates for private 4G/5G networks that provide dedicated bandwidth, security, and high capacity for applications from sensor-based IoT to AR/VR enabled machine maintenance, as well as surveillance with video analytics.

## Rated Competitors

<b>Company Name</b>	AT&T	
<b>Product Name</b>	AT&T Global Enterprise Mobility Services	
<b>Current Perspective</b>	<p>AT&amp;T is a leader in enterprise mobility with professional services, platforms, devices, and applications. Offers include 4G/5G for Business, private cellular networks, multi-access edge computing, wireless broadband, workforce management, and business messaging. Mobile security includes UEM via MobileIron, VMware Workspace One, IBM MaaS360, and Lookout Endpoint Security. AT&amp;T FirstNet for public safety reaches 4 million connections among 23,000 public safety agencies. AT&amp;T and Cradlepoint offer LTE/5G wireless WAN solutions. AT&amp;T offers Private Cellular Network, for privacy and control with a fully isolated operational environment, and, in partnership with Microsoft, Private 5G Edge, combining connectivity, private core, and an edge-embedded platform for smaller or distributed sites. AT&amp;T allies with Nokia and Ericsson for private cellular networks over CBRS. In 2022 AT&amp;T reached 100 million connected IoT devices, and 9.5 million business customer locations covered by fiber. AT&amp;T offers Wireless Broadband Internet for businesses as a primary or back-up service.</p>	
<b>Buying Criteria Rating</b>	Enterprise Mobility Services Infrastructure	Very Strong

	Managed Mobility Services	Leader
	Mobile Applications	Very Strong
	Operations	Very Strong
	Professional Services	Leader
<b>Product Scores</b>	Leader	
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• AT&amp;T's LTE footprint covers 440 million people in North America; AT&amp;T offers ultra-fast 5G+ over mmWave in 44 cities and 25 venues, low-band 5G serving 255 million people, and C-Band spectrum covering 130 million people.</li> <li>• AT&amp;T offers a comprehensive portfolio of mobile devices, rate plans, consulting and professional services, EMM platforms, and device lifecycle solutions, along with expense management and application development.</li> <li>• AT&amp;T mobility solutions are integrated with primary strategic areas, including cloud, virtualization, IoT, and end-to-end security. AT&amp;T is the leader in US IoT Services, with over 100 million connected devices.</li> <li>• AT&amp;T FirstNet, the private LTE network for public safety network has over 4 million connections at more than 23,000 public safety agencies and organizations.</li> <li>• AT&amp;T offers multiple Private Cellular Network (PCN) solutions: PCN provides privacy and control with a fully isolated operational environment. In partnership with Microsoft, Private 5G Edge combines connectivity, private core, and an Azure edge-embedded platform for smaller or distributed sites. AT&amp;T also allies with Nokia and Ericsson for PCN over CBRS.</li> </ul>	
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• AT&amp;T's position in the global segment for managed mobility remains limited, although the carrier claims it is gaining traction in global accounts, due to the implementation of large-scale global asset tracking and control solutions.</li> <li>• Service providers BT, Orange Business Services, and DT/T-Systems have positioned themselves more overtly as full-fledged professional services companies for mobility; IT service providers are also threatening as competitors.</li> </ul>	
<b>Company Name</b>	BT	



<b>Product Name</b>	BT Enterprise Mobility	
<b>Current Perspective</b>	<p>BT offers strong enterprise mobility services, enriched with partnerships. The Mobile Solutions portfolio includes secure access over EE’s network, Samsung/Android and Apple devices, cybersecurity services, managed and professional services, and 5G private networks, fixed wireless access, and in-building infill including Neutral Host. BT offers managed field force automation, device lifecycle management, and UEM. It is strong in mobile security, with Ivanti for device/application/content management, and Jamf for end point threat defense. BT’s global capabilities are enhanced by membership in the FreeMove Alliance. BT is deploying and running public and private 5G networks and works with local business/public sector/ MNCs to identify compelling 5G use cases, delivered through its Division X customer solutions unit. BT Group has a mobile convergence plan, with integration of fiber, Wi-Fi, and mobile networks to be complete by the mid-2020s. In 2022 BT and Ericsson partnered to provide 5G private networks, working with vendors and hyperscalers, targeting manufacturing, defence, education, retail, healthcare, transport, and logistics sectors. BT is developing integration between EE mobile and Microsoft Teams, one of only five Operator Connect Mobile partners globally.</p>	
<b>Buying Criteria Rating</b>	Enterprise Mobility Services	Strong
	Infrastructure	
	Managed Mobility Services	Very Strong
	Mobile Applications	Competitive
	Operations	Strong
	Professional Services	Very Strong
<b>Product Scores</b>	Strong	
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• In 2022 EE was named the UK’s best network for the ninth year in a row by RootMetrics; EE led across all seven RootScore Awards – reliability, speed, data, call, text, accessibility, and overall performance. EE is also the winner of the umlaut connect Mobile Benchmark 2022 for the eighth time.</li> <li>• BT brings a global professional services team, experience in running mobile device fleets for MNCs, direct access to the FreeMove mobile</li> </ul>	

	<p>roaming alliance, and long experience servicing the MNC and public sector target markets.</p> <ul style="list-style-type: none"> <li>• BT offers comprehensive EMS options, including WiFi and cellular connectivity, multi-operator cost management, UEM and app store enablement, and mobile security based on industry-leading products.</li> <li>• BT focuses on some areas that competitors may offer but do not call out as a differentiator such as its managed WiFi service.</li> </ul>
<p><b>Limitations</b></p>	<ul style="list-style-type: none"> <li>• The announced repositioning of BT's Global division as a more digital-capable vendor lacks clarity in terms of its EMS offer, and could put off MNCs looking for greater predictability.</li> <li>• In spite of a global presence significantly enhanced by FreeMove, the Bridge Alliance, and other partners as well as a management overlay, BT's limited own mobile access footprint will remain an issue for some MNCs.</li> <li>• While the new BT Business brand combining MNCs and local UK business will help reduce costs, overlaps and confusion, the company will still need to promote the brand and its associated values and services in a way that appeals to enterprise customers of all sizes.</li> </ul>
<p><b>Company Name</b></p>	<p>Deutsche Telekom</p>
<p><b>Product Name</b></p>	<p>Deutsche Telekom Global Enterprise Mobility Service</p>
<p><b>Current Perspective</b></p>	<p>Deutsche Telekom's global enterprise mobility portfolio is very strong, with productivity, consulting, security, and managed mobility throughout Europe and globally. DT offers a one-stop shop for access, infrastructure management, productivity, development, and support of business solutions. It provides access to on-net mobile and fixed line services, and FreeMove and Bridge Alliance cellular footprints. UEM services are based on Ivanti, VMware and Microsoft solutions, with Wandera for data management, mobile threat defence and data policy, and Netmotion for mobile persistence management. Internal unit Detecon provides standardized consulting engagements. Zimperium automates mobile security levels via user profiles. DT helps customers deploy wearables for safety in industrial settings. Private networks, advanced IoT, and campus industrial networks are key initiatives. DT partners with EBF for an eSIM Business Manager to link systems for end-point enrolment and activation; and for Device Lifecycle Management for procurement and management. It allies with Ericsson for private campus 5G SA wireless networks, with trial customers including OSRAM. It has an alliance with Cradlepoint for Wireless WANs for SMBs, mid-market and public sector companies.</p>

<b>Buying Criteria Rating</b>	Enterprise Mobility Services Infrastructure	Very Strong
	Managed Mobility Services	Very Strong
	Mobile Applications	Very Strong
	Operations	Very Strong
	Professional Services	Very Strong
<b>Product Scores</b>	Very Strong	
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Deutsche Telekom provides a comprehensive, one-stop shop for the strategic, tactical, and operational needs of large firms using mobility to increase productivity and revenue opportunities.</li> <li>• DT can engage at any point in the customer's 'digital journey' and can leverage DT's entire product and service portfolio in creating, delivering, and optionally managing a secure customized solution.</li> <li>• Security has top priority. With cloud products, servers are located in highly secure data centers on German soil. Customers benefit from Telekom's extremely high security standards and Germany's strict data protection law.</li> </ul>	
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• DT's own global network footprint is smaller compared to some of its competitors; while FreeMove extends its reach, it may lose account control to alliance members outside its own regions.</li> <li>• The sheer size and scope of DT's mobility offer (with extensive app enablement, systems integration, and IT services from T-Systems) may be overkill for smaller customers.</li> <li>• As customers embark on digital transformation projects, they might turn to traditional management and ICT consultancies that can then choose the mobility partners.</li> </ul>	
<b>Company Name</b>	Orange Business Services	
<b>Product Name</b>	Orange International Mobility	
<b>Current Perspective</b>	Orange Business Services is very strong in global enterprise mobility, with connectivity and managed mobility; cost, contract, endpoint and incident management; global service desk; professional services; and digital integration services. Orange offers mobile connectivity in 100 countries, and	

centralized procurement, custom plans, and bundles via FreeMove/Bridge Alliances. Orange Mobile Workspace offers managed services for UEM, TEM, mobile application management, and device lifecycle management, with a sustainability program focused on repairing, recycling, redeeming, and refreshing devices. Devices include smartphones, tablets, and rugged mobile computing devices. It offers advanced cybersecurity including Mobile Threat Protection, and Cyberfiltre, a DNS filtering solution which secures mobile and WiFi internet browsing. Orange offers consulting, IT integration and global support. Orange also focuses on Mobile Frontline Workers with a variation of its managed services portfolio covering frontline devices such as mobile scanners. Orange Multisourcing Service Integration provides multi-vendor contract management, SLA reporting, performance and cost management, with visibility, monitoring, automation, security, a service catalog, dashboards, and business reviews.

<b>Buying Criteria Rating</b>	Enterprise Mobility Services	Very Strong
	Managed Mobility Services Infrastructure	Very Strong
	Mobile Applications	Very Strong
	Operations	Very Strong
	Professional Services	Very Strong
<b>Product Scores</b>	Very Strong	
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Orange has an extensive portfolio of professional services with supplier agnostic offers, processes for cost management, and expertise in multiple solutions for UEM (via Ivanti, VMWare, Microsoft Apple Business Manager, Google Zero-Touch, and Zebra StageNow), and for mobile security (including consulting deliverables for GDPR, Windows 10 management, cloud security, and malware and threat protection).</li> <li>• In 2022 it reinforced its focus on sustainability through its device lifecycle solutions, added a new Cyberfiltre app for securing mobile browsing, and added a Mobile Frontline Worker managed services suite.</li> <li>• Orange's unique Multi-sourcing Service Integration strategy offers MNCs packaged and a la carte services for mobile service management, budget control, agnostic TEM, contract management, cost optimization, process</li> </ul>	

	<p>automation, incident and request management, and IT service integration.</p> <ul style="list-style-type: none"> <li>Orange has its own mobile networks in 26 countries with 600 roaming agreements and offers 5G to 26,000 cities in Europe</li> </ul>	
<b>Limitations</b>	<ul style="list-style-type: none"> <li>While Orange has a vertical approach in IoT and offers some vertical B2B apps in accounting, audit, commerce, etc., it has not set up a formal vertically oriented organizational or product structure to add focus to its mobility offer.</li> <li>Orange still faces significant competition from providers such as Vodafone with the latter's heritage as a mobile-first provider with the most widespread global wireless connectivity. This remains important for offering managed services to enterprises with far flung facilities.</li> </ul>	
<b>Company Name</b>	Telefonica	
<b>Product Name</b>	Telefonica Enterprise Mobility	
<b>Current Perspective</b>	<p>Telefónica's global enterprise mobility services are very strong, with connectivity; UEM; device lifecycle, content and application management; and mobile security. In 2022 Telefónica added solutions including: Flex Plan tariffs that automatically change users to lower or higher plans based on actual usage; a basic Device Management service for SMEs in Brazil; Secure Digital Workplace offerings based on Checkpoint and McAfee; an Intelligent Automation solution to help customers measure and act on information to improve operations; a new UEM provider, Tanium, with extra security for the government sector; Level 1 support for proactive device management; SLAs with new parameters and commitment levels; an “XLA” framework in the UK that bases commitments on business outcomes. Telefonica has a vertical strategy for 5G which focuses on manufacturing and healthcare. It is testing innovative use cases such as Holographic Telepresence, 5G Dynamic Slicing, and VR for remote education. For UEM, Telefónica supports IBM, Ivanti, VMWare, and Microsoft Intune, offering support, operation and management with a vendor agnostic strategy, underpinned by professional services.</p>	
<b>Buying Criteria Rating</b>	Enterprise Mobility Services	Very Strong
	Infrastructure	
	Managed Mobility Services	Very Strong
	Mobile Applications	Very Strong

	Operations	Very Strong
	Professional Services	Very Strong
<b>Product Scores</b>	Very Strong	
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Telefonica added many new enterprise mobility services in 2022 ranging from new UEM solutions to new support services, security offerings and updated SLAs. It has also created new commercial propositions around 5G for use cases including 5G robots, 5G drones and 5G Remote Support</li> <li>• Mobile security continues to be a significant differentiator. Telefónica offers mobile threat protection, biometric and signature authentication, application reputation analysis, anti-malware, mobile behavioral analysis, mobile clean pipes, communication encryption, and authentication.</li> <li>• Telefónica has expanded its professional services, ranging from IT to mobile service management, a vertical approach for big customers and SMEs, and enhanced consultancy and advisory services. It has also added new support services such as Level 1 support with proactive device management.</li> <li>• In 2022 Telefonica reached 5G coverage of 83% of the Spanish population, and has deployed 5G networks in the UK, Germany, Chile, and Brazil.</li> </ul>	
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Telefónica faces strong competition from well-established, larger-scale telcos such as BT, AT&amp;T, Verizon, Vodafone, Deutsche Telekom, and Orange Business Services, which have solid market traction and presence, extensive professional services, larger footprints, and application development skills.</li> <li>• Telefónica's relatively small footprint in Europe may be a deterrent for MNCs in spite of its global alliances and global roaming options.</li> </ul>	
<b>Company Name</b>	T-Mobile	
<b>Product Name</b>	T-Mobile for Business	
<b>Current Perspective</b>	<p>T-Mobile offers strong enterprise mobility services to companies; it has traditionally appealed to SMBs with transparent, competitive pricing, price lock guarantees, and unlimited plans. Its network has the largest US 5G footprint and it is the only US operator with nation-wide 5G SA. T-Mobile offers connectivity and access, devices and services, productivity, collaboration, SDN, IoT, 5G ANS, and security. As it does not operate a wireline network, services are centered around mobile requirements. In</p>	

2022 T-Mobile launched advanced IoT, end-to-end vertical solutions, Fixed Wireless Access, private wireless solutions, mobile-centric collaboration, and expanded security. It is developing repeatable industry solutions, launching Advanced Industry Solutions with a focus on key verticals for cost-effective, standardized solutions with best-of-breed partners. It offers 5G Advanced Network Solutions, a premier offering for large enterprises, featuring public, private, and hybrid networks via alliances with Dell, Nokia, and Ericsson. T-Mobile offers services to MNCs, with free or low-cost roaming to 215 countries/destinations, and is the only US member of the FreeMove Alliance, providing mobility to MNCs in 100 countries. It allies with Deutsche Telekom for T IoT service, managing IoT connectivity across 188 destinations.

<b>Buying Criteria Rating</b>	Enterprise Mobility Services Infrastructure	Very Strong
	Managed Mobility Services	Competitive
	Mobile Applications	Strong
	Operations	Competitive
	Professional Services	Strong
<b>Product Scores</b>	Strong	
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• T-Mobile uses multiple spectrum bands to appeal to different segments and use cases. 5G coverage on 600 MHz is available to 323 million people across 1.9 million square miles. Ultra Capacity 5G leveraging 2.5 GHz spectrum covers 260 million people, nearly 85% of T-Mobile customers. T-Mobile plans to bring Ultra Capacity 5G to 300 million people by end-2023. It also offers ultra-fast mmWave-based 5G in select cities.</li> <li>• In addition to offering LTE, T-Mobile positions 5G as the technology that will free enterprises from the restrictions of legacy wireline services. Its FWA Business Internet service can offer download speeds of up to 187 Mbps making it a creditable alternative to fiber-based internet services.</li> <li>• Innovative programs for businesses include frequent promotions on plans and devices, free WiFi calling, free text and data in 215+ countries, ETF payoffs, coverage in Mexico and Canada at no charge, and veteran/military discounts. In 2022 they included free or subsidized access to wireless hotspots and high-speed data to school districts; services for SMBs (via alliance with Facebook and Canva); edge</li> </ul>	

	computing (through alliances with Amdocs and Lumen); and service for work from anywhere (WFX) employees.	
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• T-Mobile has made recent announcements and movements to shore up its position in the enterprise business segment. Though it offers competitive network coverage and pricing, its lack of value-added services (VAS) such as advisory, integration, professional services, and managed mobility has been a barrier to drawing large businesses.</li> <li>• T-Mobile’s sale of wireline assets to Cogent, while understandable, may also be a barrier to penetrating some large enterprises that prefer to get both fixed and mobile connectivity from the same provider.</li> </ul>	
<b>Company Name</b>	Verizon	
<b>Product Name</b>	Verizon Enterprise Mobility Services	
<b>Current Perspective</b>	<p>Verizon is a very strong mobility provider, with strategy, policy, and governance services; hosted/on-premises applications; and full service or self-service management. Verizon leverages vendors/platforms IBM MaaS360, Samsung Knox, Ivanti/MobileIron, Lookout, Wandera, Google G Suite, and GoCanvas. It offers Device Enrolment Programs for Apple, Samsung, and Google. Verizon allies with Ericsson, Nokia, and Celona for private wireless networks. Verizon provides first responders with priority service through push-to-talk solutions which expand on LMR capabilities. Verizon offers its own device management for smartphones/tablets/hotspots. It offers security solutions from Juniper and Samsung Knox and a Private Network option to secure mobile devices by connecting them to MPLS infrastructure. Verizon helps customers define mobility goals and processes, ensuring security and compliance. It provides device fulfilment, kitting and deployment. Verizon offers mobile edge compute with AWS Wavelength &amp; Outposts, Microsoft Azure, and via an agreement with Google. Verizon’s Fixed Wireless Access added 107,000 business FWA lines in Q3 2022. Business wireless revenue reached \$3.3 billion in the quarter, up 5.7% YoY.</p>	
<b>Buying Criteria Rating</b>	Enterprise Mobility Services Infrastructure	Very Strong
	Managed Mobility Services	Very Strong
	Mobile Applications	Strong



	Operations	Very Strong
	Professional Services	Very Strong
<b>Product Scores</b>	Very Strong	
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Verizon's consulting/professional services, security capabilities, device lifecycle management, and vertical specialists add to the strength of its mobility services portfolio.</li> <li>• Verizon positions Private Network Traffic Management, Push to Talk Plus, VoWiFi/VoLTE Calling, LTE Infrastructure solutions, Private Core, Priority and Pre-emption for Public Safety, Enterprise Messaging, One Talk, and Mobile for Microsoft Teams as key enterprise mobility offerings.</li> <li>• Verizon's 4G LTE network covers 99% of the US population; 5G Nationwide covers 230 million people, and 5G Ultra Wideband covers 175 million people.</li> <li>• Verizon offers strong public, private and hybrid MEC solutions, featuring ultra low latency via 5G UW/MEC of 50-20ms across metros and 20-7ms within C-RAN.</li> <li>• Verizon announced over ten PCN customers/trials in the in 2022. These include BlackRock (On Site 5G); ICE Mobility: (On Site 5G), private MEC (5G Edge with Microsoft Azure); Corning: Verizon 5G UW; Oracle public and private 4G and 5G; Live Nation: 5G UW; Hard Rock Stadium: 5G UW/5G Edge; Arizona State University: 5G UW/MEC; Penn State University: 5G Ultra UW/MEC; Caltech Center for Autonomous Systems and Technologies.</li> <li>• Verizon Public Sector is collaborating with the Veterans Health Administration for the development and testing of 5G MEC and drones designed to improve safety and efficiency. In January 2023, Verizon announced its Private Wireless Network with Deloitte for a smart factory in Wichita.</li> </ul>	
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Competition is intense in the enterprise mobility market; Verizon is competing just as much (if not more) with ITSPs as with mobile operators. Verizon may have less of an offer for solutions such as business consulting and app development.</li> <li>• Verizon was wise to cull services that were not well received or had low margins, but now has to make sure it can differentiate using many of the same partners as competitors, especially in the EMM segment.</li> <li>• Verizon does not name reference customers for enterprise mobility, so it is hard to know what traction the operator is achieving, especially with MNCs with overseas requirements. Its Private Network business with</li> </ul>	

	Nokia, Ericsson, and Celona, however, has already announced a slew of customers and trials.	
<b>Company Name</b>	Vodafone Business	
<b>Product Name</b>	Vodafone Global Enterprise Mobility Services	
<b>Current Perspective</b>	<p>Vodafone Business’ enterprise mobility portfolio covers Connectivity and Devices (SD-WAN, SD-LAN, international connectivity, DLM, DaaS); Security and Analytics (UEM, UES, managed security, advisory, detection and response); Cloud and Infrastructure (multi-cloud, MPN, edge); and Solutions and Applications (digital apps, 5G solutions, IoT). Managed mobility includes Red Tariffs, Usage Manager, and Telecoms Reporting; Devices and DLM; Mobile Security including Device Manager Cloud, Secure Device Manager Cloud, BES, UEM services through MS Intune, Knox Manage, and MaaS360; UES through Lookout, Trend Micro, Zscaler, Zimperium, and MS Defender; and Value-Added Services including managed security, global program management, Red Flex, DLM and UEM help desks, and in-building solutions. In 2022 Vodafone rolled out 5G in 13 markets; launched new MPN Safe Worker and Augmented Worker programs; launched SASE propositions to bring together UEM/UES with SD-WAN; brought UES to 12 markets and UEM to 16 markets; and struck a global deal with distributor WWF to reduce carbon emissions and eliminate e-waste, supported by DLM capabilities to repair/refurbish phones.</p>	
<b>Buying Criteria Rating</b>	Enterprise Mobility Services	Very Strong
	Infrastructure	
	Managed Mobility Services	Leader
	Mobile Applications	Very Strong
	Operations	Leader
	Professional Services	Very Strong
<b>Product Scores</b>	Leader	
<b>Strengths</b>	<ul style="list-style-type: none"> <li>In 2021-2022 Vodafone outperformed the managed mobility market, with double the market growth for DLM, five times the market growth for Red tariffs, 42% growth in connections handled through Central Reporting, and 38% growth in security management licenses.</li> </ul>	

- Vodafone has 30-40 PCN customers and over the last 12 months has announced deals with Ford (UK, 5G PCN), Porsche (Germany, hybrid 5G SA), BASF (Germany, 5G PCN), UK Power (UK, dedicated slice of 5G SA), Dusseldorf University Hospital (Germany, 5G campus network), and Irish Manufacturing Research Center (two facilities on 5G SA).
- Vodafone has integrated UEM and UES and added zero click activation, automated remediation, higher device intelligence and unification through the VSDM dashboard.
- Vodafone added new capabilities in 2022 across the product portfolio, with a strong roadmap. For example, ITSM e-bonding for customer integration, and domestic and roaming anomaly alerts. Its TEM platform and UX will have a major relaunch and will integrate with customers' systems through APIs.

### Limitations

- Some competitors are doing more with custom mobile application development than Vodafone, providing applications, enterprise developer access to APIs, middleware platforms for app development, and bill-through third-party packaged offers.
- Competitive roaming tariffs (e.g., from FreeMove partners Orange, TeliaSonera, DT, BT, and the Bridge Alliance) are extending competitive footprints through alliances, with individual optimized plans to go after Vodafone's Red tariff and roaming options. They also plan to add DLM options but lack Vodafone's strong owned and partner footprint.
- While MPN is a strong offering, ITSPs and infrastructure vendors are determined to take a lead in many private wireless network deployments and offer a range of value-added and professional services which may compete with Vodafone's own initiatives.

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