

ENTERPRISE MOBILITY MANAGEMENT MARKET

GLOBAL FORECAST TO 2026

BY COMPONENT, SOLUTION (MOBILE DEVICE MANAGEMENT,
MOBILE APPLICATION MANAGEMENT), DEPLOYMENT MODE,
ORGANIZATION SIZE, VERTICAL (BFSI, MANUFACTURING), AND REGION

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LIST OF ABBREVIATIONS

ABBREVIATION	FULL FORM
AI	Artificial Intelligence
APAC	Asia Pacific
API	Application Programming Interfaces
APM	Advanced Patient Monitoring
AR	Augmented Reality
ATM	Automated Teller Machine
B2B	Business-to-Business
B2C	Business-to-Consumer
BFSI	Banking, Financial Services, and Insurance
BMGF	Bill and Melinda Gates Foundation
BRIC	Brazil, Russia, India, and China
BU	Business Unit
BYOD	Bring Your Own Device
CAGR	Compound Annual Growth Rate
CAMP	Cloud Application Management for Platforms
CEO	Chief Executive Officer
CLM	Client Lifecycle Management
CMIS	Content Management Interoperability Services
COBO	Corporate-Owned Business-Only
COPE	Corporate-Owned Personally-Enabled
COSU	Corporate-Owned, Single-Use
CRM	Customer Relationship Management
CSEC	Communication Security Establishment Security Canada
CYOD	Choose Your Own Device
DDoS	Distributed Denial-of-Service
DEP	Device Enrollment Program
DPA	Data Protection Authority
DPIA	Data Protection Impact Assessments
ECG	Electrocardiography

EDL	Electronic Data Logging
EMM	Enterprise Mobile Management
EMS	Enterprise Mobility + Security
EU	European Union
EUC	End-User Computing
EUDPD	European Union Data Protection Directive
FDI	Foreign Direct Investment
FIPS	Federal Information Processing Standard
FISMA	Federal Information Security Management Act
GBS	Global Business Services
GC	Government of Canada
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GPS	Global Positioning System
GSMA	Global System for Mobile Communications Association
HIPAA	Health Insurance Portability and Accountability Act
HITECH	Health Information Technology for Economic and Clinical Health
HR	Human Resources
HTML	Hypertext Markup Language
IAM	Identity and Access Management
ICD	Imaging and Configuration Designer
ICS	Industrial Control Systems
IoT	Internet of Things
IPA	Indoor Positioning Analytics
ISO	Organization for Standardization
ISV	Independent Software Vendor
IT	Information Technology
JITC	Joint Interoperability Test Command
LGPD	Lei Geral de Proteção de Dados
MAM	Mobile Application Management
MCM	Mobile Content Management

MDM	Mobile Device Management
MEA	Middle East and Africa
MENA	Middle East and North Africa
MFA	Multi-Factor Authentication
MIAM	Mobile Identity and Access Management
ML	Machine Learning
MTD	Mobile Threat Defense
NCSC-NL	National Cyber Security Centre of the Netherlands
NDB	Notifiable Data Breaches
NERC CIP	North American Electric Reliability Corporation Critical Infrastructure Protection
NFC	Near-Field Communications
NIST	National Institute of Standards and Technology
OASIS	Organization for the Advancement of Structured Information Standards
OEM	Original Equipment Manufacturer
OMA	Open Mobile Alliance
OS	Operating System
PC	Personal Computer
PCI	Payment Card Industry
PDA	Personal Digital Assistant
PDPL	Personal Data Protection Law
PII	Personally Identifiable Information
PIN	Personal Identification Number
PIPA	Personal Information Protection Act
PoS	Point of Sale
QR	Quick Response
R&D	Research and Development
RFID	Radio-Frequency Identification
RIM	Research in Motion
RMA	Records Management Application
SaaS	Software-as-a-Service
SAM	Software Asset Management
SDDC	Software-Defined Data Center

SDK	Software Development Kit
SDM	Snow Device Manager
SEC	Securities and Exchange Commission
SLA	Service-Level Agreement
SLM	Snow License Manager
SMA	Systems Management Appliance
SMS	Short Message Service
TCO	Total Cost of Ownership
TEMIA	Technology Expense Management Industry Association
TOSCA	Topology and Orchestration Specification for Cloud Applications
UEBA	User and Entity Behavior Analytics
UEM	Unified Endpoint Management
UES	Unified Endpoint Security
UI	User Interface
UL	Underwriters Laboratories
UPS	Uninterruptible Power Supply
USD	United States Dollar
UWEC	University of Wisconsin, Eau Claire
VAD	Value Added Distributor
VAR	Value-Added Reseller
VIBS	Vodafone Idea Business Services
VP	Vice President
VPN	Virtual Private Network
VPP	Volume Purchase Program
VR	Virtual Reality
VSDM	Vodafone Secure Device Manager
WHO	World Health Organization
Wi-Fi	Wireless Fidelity
XM	Experience Management
ZSO	Zero Sign-On

1 INTRODUCTION

1.1 INTRODUCTION TO COVID-19

COVID-19 is an infectious disease caused by a novel coronavirus. Largely unknown before its outbreak in Wuhan, China, in December 2019, COVID-19 moved from being a regional crisis to a global pandemic in just a few weeks. The World Health Organization (WHO) declared COVID-19 as a pandemic on March 11th, 2020.

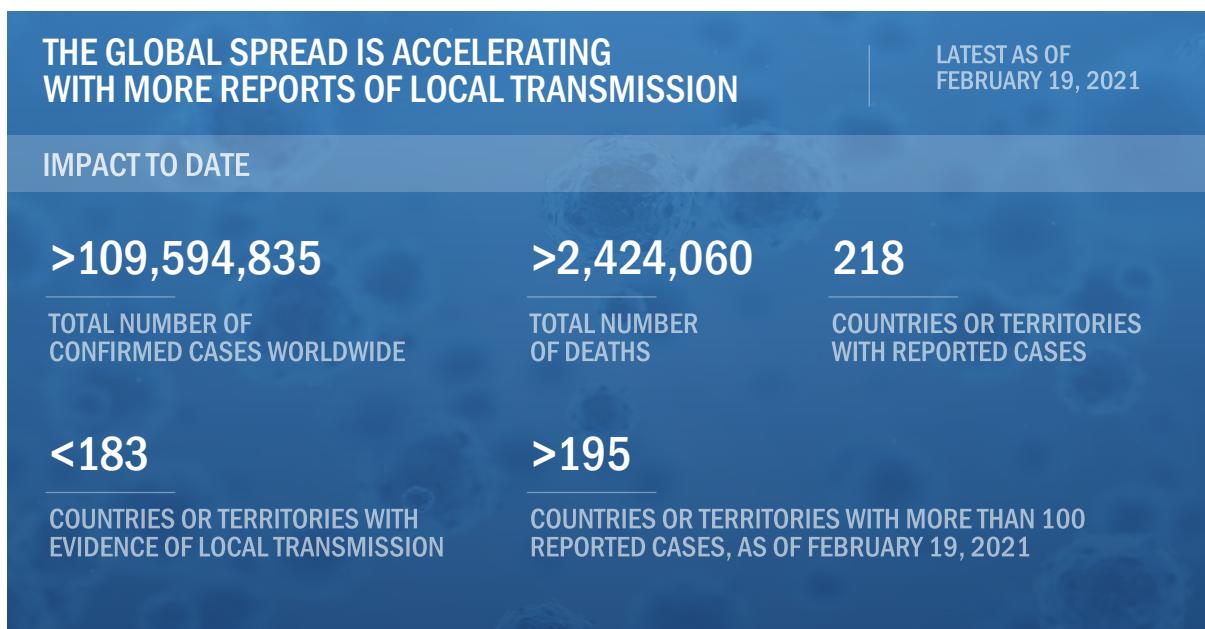
As the virus is spreading rapidly at a global level, countries across the globe are trying to prevent further contagion by adopting measures, such as social distancing, contact tracing, self-quarantining, surveillance, communication, and testing. So far, China, South Korea, Japan, and Singapore have managed to flatten the curve, while the US, Italy, Spain, Germany, France, and Iran are imposing drastic measures to slow down the spread and control fatalities.

Government agencies have announced special financial aid packages toward the development of preventive and curative drugs, the purchase of critical care medical devices, and the fast-track approval of diagnostic tests. Various organizations across the globe, such as the Bill and Melinda Gates Foundation (BMGF) and Wellcome Trust, are also coming together to accelerate and strengthen the efforts to fight the COVID-19 pandemic.

1.2 COVID-19 HEALTH ASSESSMENT

It is an unprecedented crisis creating an enormous strain on healthcare providers across the globe. According to WHO, within 67 days, the first 100,000 confirmed cases were reported worldwide. It took the first 11 days to reach 200,000 confirmed cases. In the next four days, the number reached 300,000 confirmed cases, while in another 12 days, the count reached one million confirmed cases.

FIGURE 1 COVID-19: GLOBAL PROPAGATION

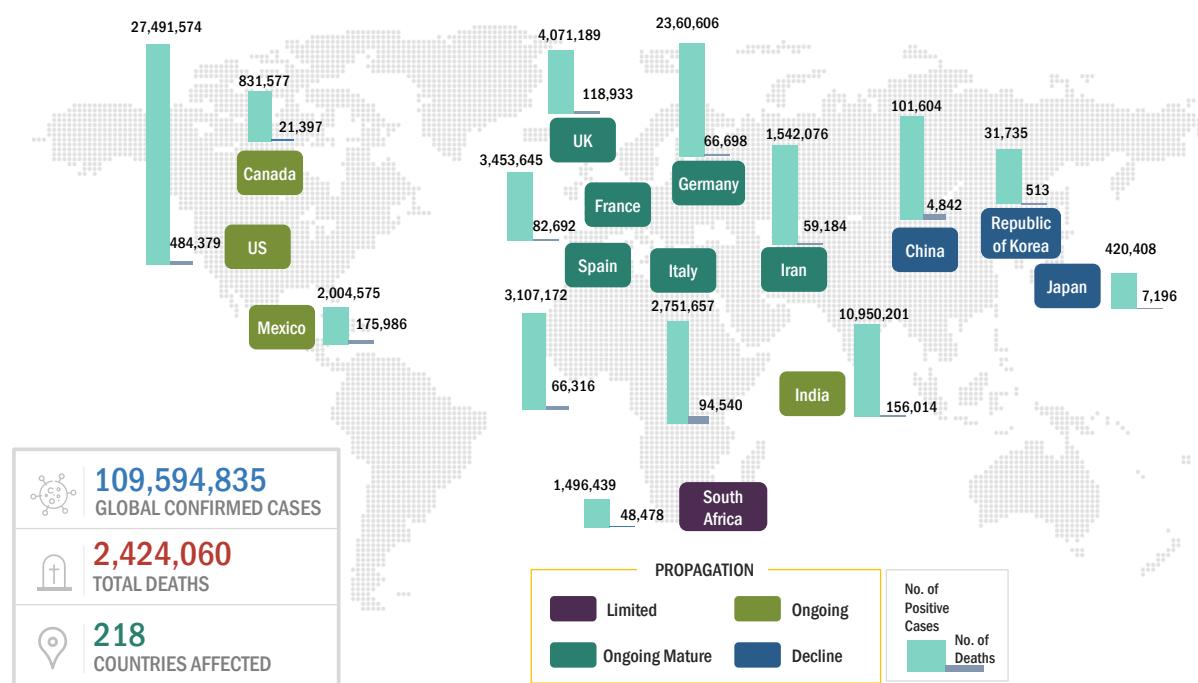


Source: WHO and ECDC

As of February 19, 2021, the virus has spread to more than 218 countries, with over 109,594,835 reported cases and close to 2,424,060 deaths.

The actual number of infected people is probably higher than the official total, as some mild and asymptomatic cases are not tested and counted.

FIGURE 2 COVID-19 PROPAGATION: SELECT COUNTRIES



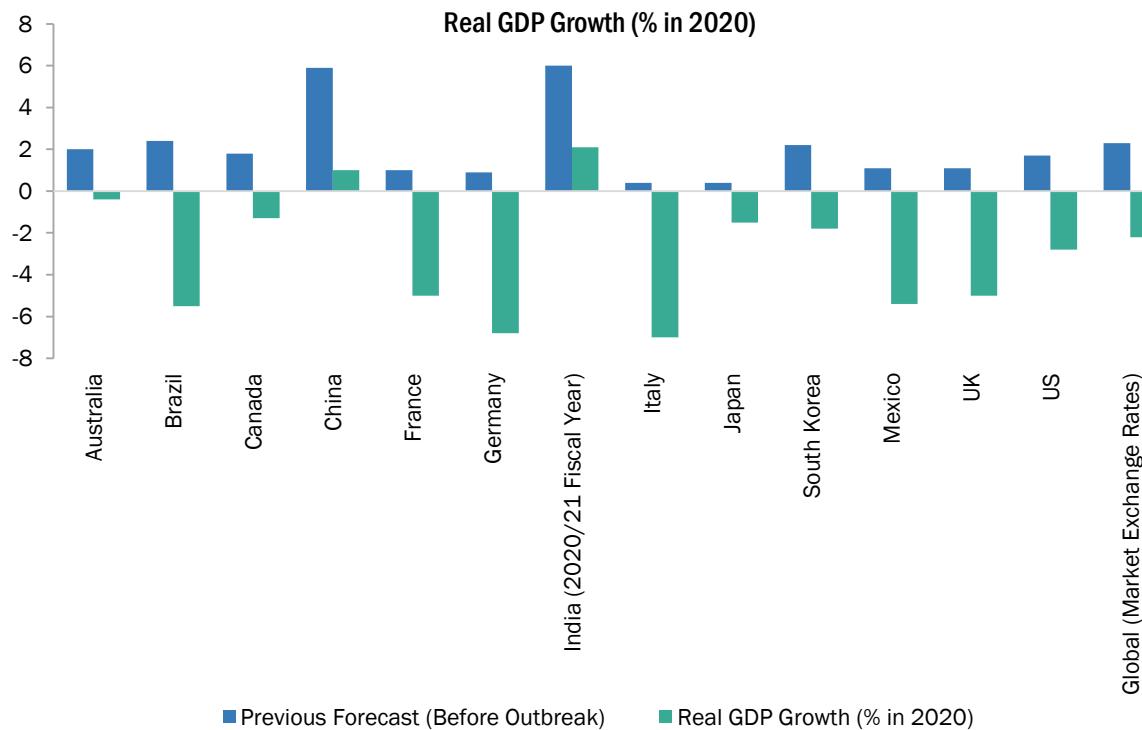
Source: WHO Coronavirus Disease 2019; data as of February 19, 2021

Disease progression patterns are similar in most countries; however, flattening of the curve and disease containment are largely dependent on various measures taken by each country. China and South Korea, for example, have managed to control the spread of the disease by implementing severe countermeasures, such as restricting travel; imposing city-wide quarantines, curfews, and lockdowns; building specialty hospitals; increasing medical aid; and ramping up testing. Most other countries are trying to emulate these measures to contain the spread of the disease.

1.3 COVID-19 ECONOMIC ASSESSMENT

COVID-19 has not only affected the healthcare sector but also impacted the global economy. It has had a significant economic impact on various financial as well as industrial sectors, such as energy, oil and gas, transportation and logistics, manufacturing, and aviation. It is predicted that the global economy will go into recession due to the loss of trillions of dollars. With the increasing number of countries imposing and extending lockdowns, economic activities are declining, which would impact the global economy.

FIGURE 3 REVISED GROSS DOMESTIC PRODUCT FORECASTS FOR SELECT G20 COUNTRIES IN 2020



Source: *The Economist Intelligent Unit*

With the combined effects of the pandemic and the slump in global oil prices, investments are expected to contract sharply this year, especially in the energy sector. Export growth is also expected to reduce drastically. A recovery is expected in the second half of the year, provided there is no emergence of another wave of the pandemic, and countries manage to control the spread quickly and resume routine.

China has managed to contain the spread and is currently on track to resume routine. It is expected to recover in the second half of the year. However, the eurozone, one of the hardest-hit regions, is expected to undergo a recession throughout 2020. Within the eurozone, Germany, which is a manufacturing hub, would recover at a much slower pace than the other countries. The US economy is also expected to see a slump, with unemployment set to rise; recovery will be slow and will only be seen in the second half of the year.

1.3.1 COVID-19 ECONOMIC IMPACT—SCENARIO ASSESSMENT

Recovery from this crisis largely depends on various knowns and unknowns, which most countries will have to deal with and respond to. The speed and strength of the economic recovery will depend on the health and economic responses as well as the agility and speed of implementing various measures.

FIGURE 4 CRITERIA IMPACTING GLOBAL ECONOMY



In the recent past, the global economy became substantially more interconnected. The adverse consequences of various steps related to containment are evident from global supply chain disruptions, weaker demand for imported products and services, and the increase in the unemployment rate. Risk aversion has increased in the financial market, with all-time low-interest rates and sharp declines in equity and commodity prices. Consumer and business confidence have also reduced significantly.

This has magnified over time, and the spillover is seen in other countries as well. The latest forecasts by multiple sources predict a four percent decrease in the global Gross Domestic Product (GDP) in 2020 and a slow recovery, making the recession caused by this pandemic worse than the 2009 global recession. Based on these forecasts, the global economy is expected to recover by 2021, but for some countries, including the US, Germany, and Italy, recovery is predicted to take longer.

In this fast-changing environment, the full impact of the pandemic on the global economy may not entirely be known. MarketsandMarkets uses three scenario-based approaches (epidemiology, health response, and economic response) to assess the economic impact and recovery period at the global level. Countries and regions are expected to have different impacts and recovery periods.

FIGURE 5 SCENARIOS IN TERMS OF RECOVERY OF GLOBAL ECONOMY

SCENARIO	OPTIMISTIC	REALISTIC	PESSIMISTIC
EPIDEMIOLOGY/CONTAGION SPREAD AND HEALTH RESPONSE			
FATALITY RATE 1.5-2%	FATALITY RATE 2-3.5%	FATALITY RATE MORE THAN 3.5%	
HOSPITALIZATION RATE: LESS THAN 15%			
ADDITIONAL ICU BEDS AND LESS THAN 2.5 - 5%	ADDITIONAL ICU BEDS 5%	ADDITIONAL ICU BEDS 15%	ADDITIONAL ICU BEDS 25%
ADDITIONAL VENTILATORS 15%	ADDITIONAL VENTILATORS 15-20%		ADDITIONAL VENTILATORS 25%
ECONOMIC RESPONSE			
FISCAL STIMULUS TO THE TUNE OF USD 7.5-8 TRILLION GLOBALLY	FISCAL STIMULUS TO THE TUNE OF USD 5-7.5 TRILLION GLOBALLY	FISCAL STIMULUS TO THE TUNE OF LESS THAN USD 5 TRILLION GLOBALLY	
EMERGENCY FUNDING TO SUPPORT EFFORTS TO FIGHT COVID-19 TO THE TUNE OF USD 100 BILLION GLOBALLY	EMERGENCY FUNDING TO SUPPORT EFFORTS TO FIGHT COVID-19 TO THE TUNE OF USD 75-100 BILLION GLOBALLY	EMERGENCY FUNDING TO SUPPORT EFFORTS TO FIGHT COVID-19 TO THE TUNE OF LESS THAN USD 75 BILLION GLOBALLY	
MULTILATERAL AGENCIES FINANCING TO THE TUNE OF USD 100 BILLION GLOBALLY	MULTILATERAL AGENCIES FINANCING TO THE TUNE OF USD 50-75 BILLION GLOBALLY	MULTILATERAL AGENCIES FINANCING TO THE TUNE OF LESS THAN USD 50 BILLION GLOBALLY	
RECOVERY SCENARIO			
<ul style="list-style-type: none"> ▪ Milder recession in 2020 Q1 and Q2; stronger recovery in 2020 Q3 and after ▪ US: Recovery by 2020 Q3 ▪ EU5: Recovery by 2020 Q3 ▪ China: Recovery by 2020 Q2 ▪ India: Recovery by 2020 Q3 	<ul style="list-style-type: none"> ▪ Recession in 2020 Q1 and Q2; partial bounce back in 2020 Q3, then slow growth ▪ US: Recovery by 2020 Q4 ▪ EU5: Recovery by 2020 Q4 ▪ China: Recovery by 2020 Q2 ▪ India: Recovery by 2020 Q3 	<ul style="list-style-type: none"> ▪ Deeper recession in 2020 Q1, Q2, and Q3; modest rebound in 2020 Q4 ▪ US: Recovery by 2021 Q1 ▪ EU5: Recovery by 2021 Q1 ▪ China: Recovery by 2020 Q3 ▪ India: Recovery by 2020 Q4 	

Source: UNCTAD, Moody's, FAS, OECD, and MarketsandMarkets Analysis

With millions of confirmed cases of COVID-19, businesses are coping with lost revenues and disrupted supply chains as factory shutdowns and quarantine measures are spreading across the globe, restricting movement and business activities. The economic impact is mounting, and the top economies of the world are expected to enter a global recession.

To provide a perspective on various scenarios, we assume factors that would impact the economic recovery from the global recession.

In a realistic scenario, we assume that possible health and economic responses will help economies bounce back partially in 2020 Q3. In Q1 and Q2 of 2020, countries will ramp up their testing capacities and critical healthcare services as well as increase the availability of financial aid. This will help contain the spread of the virus. The economic recession will last until 2020 Q2; a slow recovery will be seen from 2020 Q3. This is expected to be a 'U-shaped' economic recovery, with a gradual improvement in the economy.

In an optimistic scenario, the economy is expected to recover much faster and will continue from 2020 Q3. A quick return to a routine will be seen after the curve of infection flattens toward the end of 2020 Q2 due to time-bound and efficient measures, both health and economic. In this scenario, most economies will experience a mild recession, and the growth would accelerate in 2021. This is expected to be a 'V-shaped' economic recovery, with a strong and fast improvement in the economy. In a pessimistic scenario, we assume that all measures, both health and economic, would neither help control the spread of the virus nor lead to economic recovery. Most economies would experience unprecedented economic losses, along with social and political turmoil. In this scenario, most economies will face a recession till 2020 Q3, and modest recovery will begin in 2020 Q4. This is expected to be an 'L-shaped' economic recovery, with countries taking longer to return to their pre-crisis levels.

To assess the impact of COVID-19 and provide market forecasts, similar scenario-based approaches have been considered in this report.

1.4 OBJECTIVES OF THE STUDY

- To define, describe, and forecast the EMM market by component (solutions and services), organization size, deployment mode, vertical, and region
- To provide detailed information about major factors (drivers, restraints, opportunities, and industry-specific challenges) influencing the market growth
- To analyze opportunities in the market and provide details of the competitive landscape for stakeholders and market leaders
- To forecast the market size of segments with respect to five main regions: North America, Europe, Asia Pacific (APAC), Middle East and Africa (MEA), and Latin America
- To profile key players and comprehensively analyze their market rankings and core competencies
- To analyze competitive developments, such as partnerships, new product launches, and mergers and acquisitions, in the EMM market
- To analyze the impact of the COVID-19 pandemic on the EMM market

1.5 MARKET DEFINITION

According to IBM, EMM is a collective set of tools and technologies used to maintain and manage how mobile and handheld devices are used within an organization for routine business operations. Most often used for securing corporate data, EMM involves smartphones, laptops, and tablets, and people, processes, and policies across all mobile and handheld devices involved in business processes.

According to VMware, enterprise mobility (also known as business mobility) is a growing trend of businesses to offer remote working options, allow the use of personal laptops and mobile devices for business purposes, and make use of cloud technology for data access. Enterprise mobility recognizes the need for greater agility brought on by a shift from the traditional central office business model.

According to BMC, EMM is a collective set of policies, practices, and technology solutions that allow organizations to manage and control mobile devices for corporate use. These devices may be corporate-owned or BYOD (Bring Your Own Device) used to access sensitive business information.

1.5.1 INCLUSIONS AND EXCLUSIONS

CATEGORY	INCLUSION	EXCLUSION
EMM Market	<p>The Business-to-Business (B2B) approach is considered for revenue estimation.</p> <p>Vendors offering EMM solutions and services with security-focused functionalities are considered in the report.</p>	The Business-to-Consumer (B2C) approach is not considered for calculating revenue.
Components	The report covers revenue generated from EMM hardware, solutions, and services.	Third-party vendors
Solutions	The report includes solutions comprising platforms and software. The software comprises Application Programming Interfaces (APIs) and Software Development Kits (SDKs) specific to EMM.	Open-source platforms are not considered; however, open-source platforms that are integrated with supporting technologies and imply cost toward developing EMM solutions are considered.
Services	<p>The report includes managed and professional services.</p> <p>Professional services include consulting, deployment and integration, and support and maintenance services.</p>	<p>Consulting services mentioned in the report are pre-deployment services. Post-deployment services are not included in the current scope.</p> <p>Services such as IT outsourcing, application development, and Business Process Outsourcing (BPO) are not included in the study.</p>
Verticals	The report includes verticals that are at significant risk of data breaches. The verticals included are BFSI, government, healthcare and life sciences, retail e-commerce, manufacturing, IT and telecom, travel and hospitality, transportation and logistics, and other verticals (education, energy and utilities, and media and entertainment).	Other verticals such as food and beverages are not included in the scope of the report.

Source: MarketsandMarkets Analysis

1.6 MARKET SCOPE

The study provides an in-depth analysis of the EMM market based on contemporary market trends and developments, and its potential growth from 2021 to 2026. It includes detailed market trends, competitive landscape, market size, forecasts, and analysis of key EMM solution providers.

1.6.1 MARKET SEGMENTATION

EMM MARKET																
BY COMPONENT		BY SOLUTIONS		BY VERTICAL												
BY ORGANIZATION SIZE		BY DEPLOYMENT MODE		BY REGION												
 Solutions	 Mobile Device Management (MDM)	 Banking, Financial Services, and Insurance	 Services	 Mobile Application Management (MAM)	 Retail and E-commerce	 Professional Services	 Healthcare and Life Sciences	 Information Technology (IT) and Telecom	 Deployment and Integration	 Manufacturing	 Government	 Managed Services	 Transportation and Logistics	 Travel and Hospitality	 Other Verticals*	
 SMEs	 On-premises	 North America	 Large Enterprises	 Cloud	 Europe		 APAC		 MEA		 Latin America					

*Other verticals include education, energy and utilities, and media and entertainment.

Source: MarketsandMarkets Analysis

1.6.2 REGIONS COVERED

 NORTH AMERICA	 EUROPE	 APAC	 MEA	 LATIN AMERICA
<ul style="list-style-type: none"> ▪ US ▪ Canada 	<ul style="list-style-type: none"> ▪ UK ▪ Germany ▪ France ▪ Rest of Europe* 	<ul style="list-style-type: none"> ▪ China ▪ India ▪ Japan ▪ Rest of APAC** 	<ul style="list-style-type: none"> ▪ Israel ▪ UAE ▪ South Africa ▪ Rest of MEA*** 	<ul style="list-style-type: none"> ▪ Brazil ▪ Mexico ▪ Rest of Latin America****

*Rest of Europe includes Italy, Spain, Sweden, and Denmark.

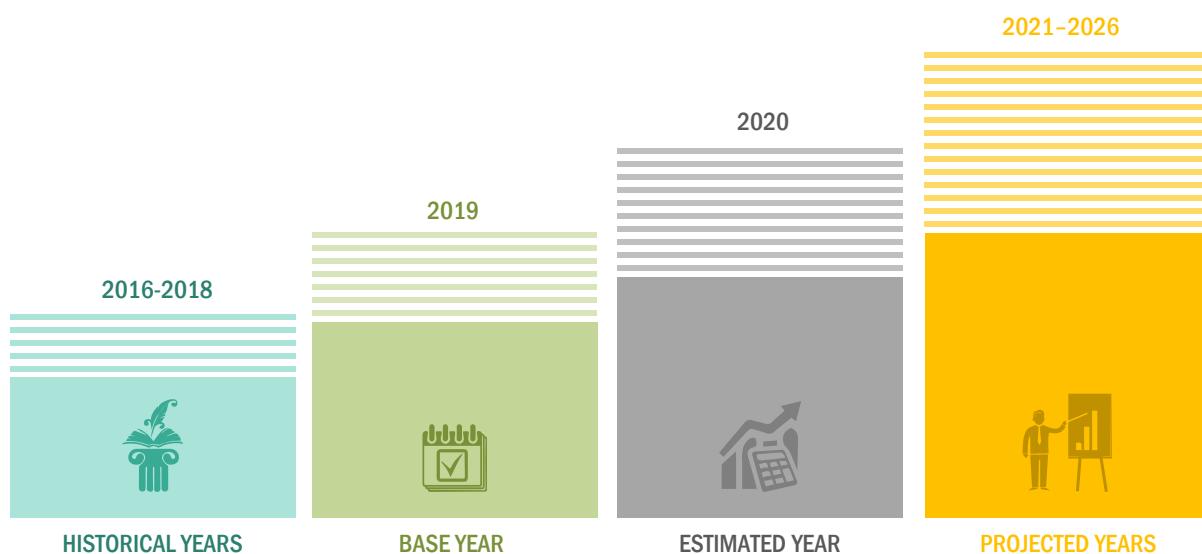
**Rest of APAC includes ANZ, South Korea, Singapore, and Malaysia.

***Rest of MEA includes Israel, Qatar, Turkey, and Kuwait.

****Rest of Latin America includes Argentina, Colombia, Peru, and Chile.

Source: MarketsandMarkets Analysis

1.6.3 YEARS CONSIDERED FOR THE STUDY



Note: The forecast period is 2020–2026.

Source: MarketsandMarkets Analysis

1.7 CURRENCY CONSIDERED

The base currency used in the report is the United States Dollar (USD), with the market size indicated in USD million/billion.

- The revenue figures were sourced from the annual reports of companies.
- The average annual currency conversion rate was used for companies that reported their revenues in currencies other than the USD.

TABLE 1 UNITED STATES DOLLAR EXCHANGE RATE, 2018–2020

Currency	2018	2019	2020
Euro	0.848	0.893	0.877

Source: US Internal Revenue Service (IRS)

1.8 STAKEHOLDERS

- EMM Solution Providers
- Independent Software Vendors (ISVs)
- Investors and Venture Capitalists (VCs)
- Managed Service Providers
- Support and Maintenance Service Providers
- System Integrators (SIs)/Migration Service Providers
- Value-added Resellers (VARs) and Distributors

1.9 SUMMARY OF CHANGES

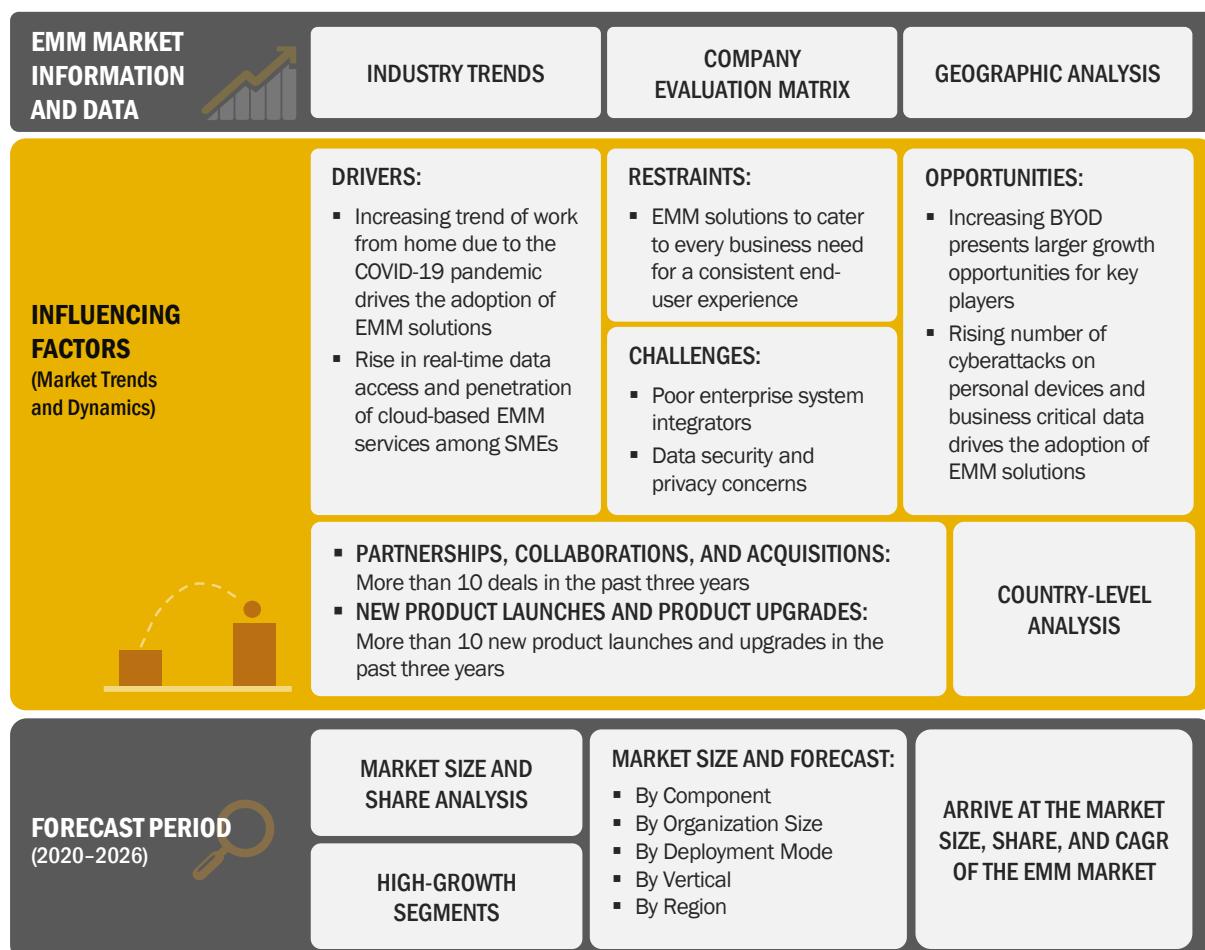
- In the previous edition of the report, the main market was segmented based on solution, service, end user, vertical, and region. In the new study, the market has been segmented based on component, organization size, deployment mode, vertical, and region. The segmentation is modified based on secondary research, primary research, and MarketsandMarkets analysis, and has been verified with primary experts.
- The new research study includes a COVID-19 impact on the EMM market.
- The new study comprises operational drivers for segments and regions.
- The new research study consists of 25 players as compared to 11 in the previous version.
- The earlier version of the report included the enterprise evaluation matrix only. The new research report includes an updated enterprise evaluation matrix and a startup evaluation matrix.
- The new edition of the report provides updated financial information in the context of EMM until 2019–2020.

2 RESEARCH METHODOLOGY

2.1 RESEARCH DATA

The research study for the EMM market involved the use of extensive secondary sources, directories, and several journals and magazines such as 'Enterprise Mobility solutions can leverage ERP Systems,' 'Enterprise Mobility Management: An Overview (IJESRT),' and 'The Evolution of Enterprise Mobility Management,' to identify and collect information useful for this comprehensive market research study. Primary sources were mainly industry experts from the core and related industries, preferred EMM providers, third-party service providers, consulting service providers, end users, and other commercial enterprises. In-depth interviews were conducted with various primary respondents, including key industry participants and subject matter experts, to obtain and verify critical qualitative and quantitative information, and assess the market's prospects. The following figure highlights the research methodology applied to make the EMM market report:

FIGURE 6 EMM MARKET: RESEARCH DESIGN



Source: MarketsandMarkets Analysis

2.1.1 SECONDARY DATA

The market size of companies offering EMM solutions and services was arrived at based on secondary data available through paid and unpaid sources. It was also arrived at by analyzing the product portfolios of major companies and rating the companies based on their performance and quality.

In the secondary research process, various sources were referred to, for identifying and collecting information for this study. Secondary sources included annual reports, press releases, and investor presentations of companies; white papers, journals, and certified publications; and articles from recognized authors, directories, and databases. The data was also collected from other secondary sources, such as articles such as 'The rise of mobility in manufacturing,' 'Enterprise Mobility Management: An Overview (IJSERT),' 'The Evolution of Enterprise Mobility Management,' and other magazines. The EMM spending of various countries was extracted from respective sources. Secondary research was mainly used to obtain key information about the industry's value chain and supply chain to identify key players based on solutions; services; market classification and segmentation according to offerings of major players; industry trends related to solutions, services, deployment modes, verticals, and regions; and key developments from both market- and technology-oriented perspectives.

2.1.2 PRIMARY DATA

In the primary research process, various primary sources from both supply and demand sides were interviewed to obtain qualitative and quantitative information on the market. The primary sources from the supply side included various industry experts, including Chief Experience Officers (CXOs); Vice Presidents (VPs); directors from business development, marketing, and product development/innovation teams; related key executives from EMM solution vendors, SIs, professional service providers, and industry associations; and key opinion leaders.

Primary interviews were conducted to gather insights, such as market statistics, revenue data collected from solutions and services, market breakups, market size estimations, market forecasts, and data triangulation. Primary research also helped in understanding various trends related to technologies, applications, deployments, and regions. Stakeholders from the demand side, such as Chief Information Officers (CIOs), Chief Technology Officers (CTOs), Chief Strategy Officers (CSOs), and end users using EMM solutions, were interviewed to understand the buyer's perspective on suppliers, products, service providers, and their current usage of EMM solutions and services, which would impact the overall EMM market.

TABLE 2 PRIMARY INTERVIEWS

EMM SOLUTION AND SERVICE PROVIDERS	
Matrix42	SOTI
Codeproof Technologies	ProMobi Technologies

2.1.2.1 Breakup of primary profiles



*Others include sales managers, marketing managers, and product managers

Note: Tier 1 companies' revenue is more than USD 10 billion; tier 2 companies' revenue ranges between USD 1 and 10 billion; and tier 3 companies' revenue ranges between USD 500 million and USD 1 billion.

Source: Industry Experts

2.1.2.2 Key industry insights

“Small- and medium-sized businesses are lost when it comes to mobile security and managing a broad range of devices. Most of them simply ignore key mobile security protection because they lack in-house expertise or the resources required to protect their computing assets, including confidential business data on mobile devices. COVID-19 has amplified the adoption of WFH models, the need to manage the entire gamut of corporate devices, and the security risks that come with an increasingly distributed workforce. As a result, the importance of a centralized Mobile Device Management (MDM) software to equip SMBs for the 2020s is more acute than ever.”

- Satish Shetty, Chief Executive Officer, Codeproof Technologies

“As more and more information is being stored on the cloud, the mobile endpoint is now becoming the weakest point in the security chain. So, it's important to educate co-workers on good IT security hygiene.”

- President, Leading Mobile Security Solution Provider

“The Android and iOS operating systems will dominate the mobile market; other operating systems will be extinct in the next few years.”

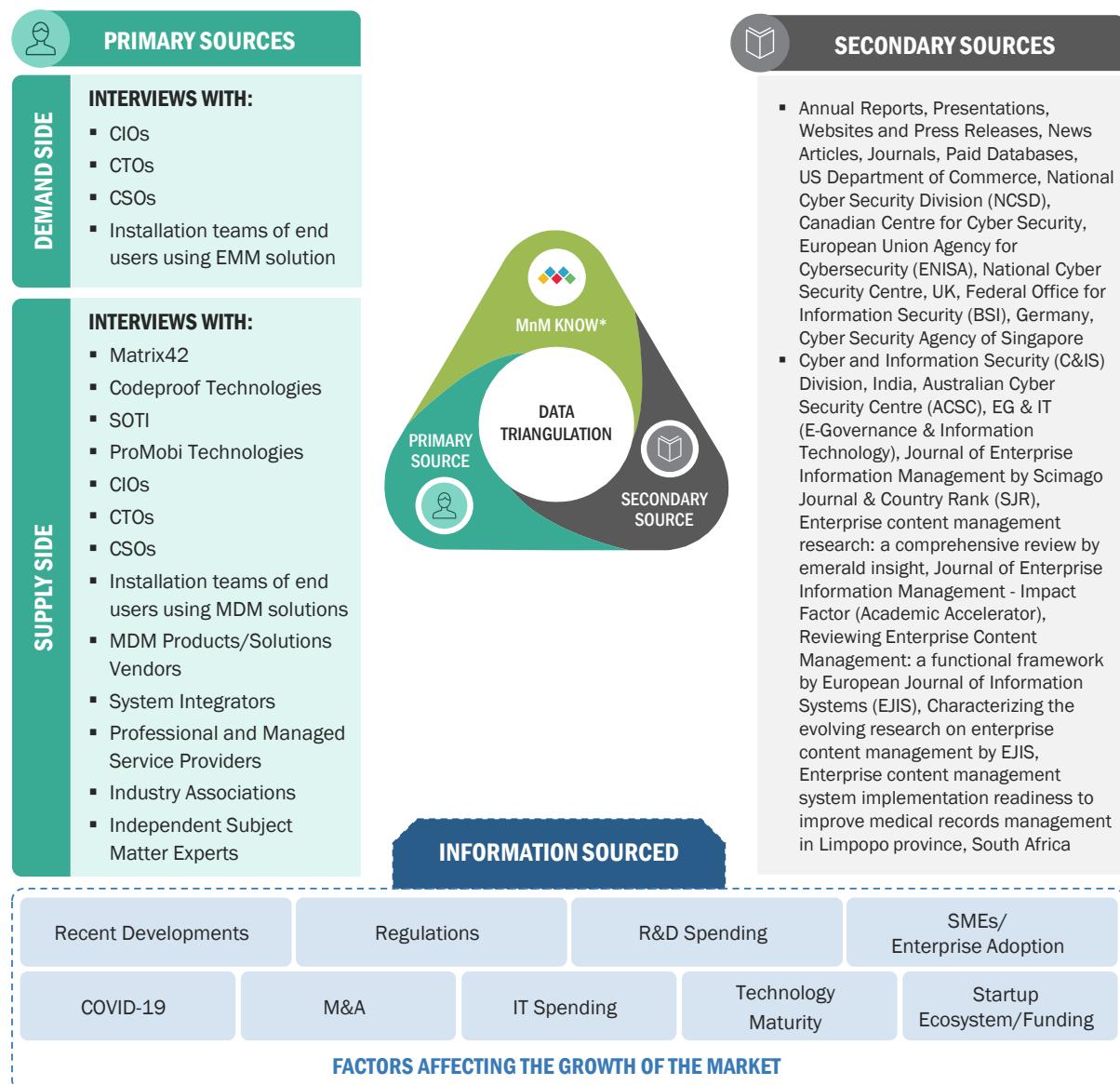
- SVP and GM of Mobile Security, Leading Endpoint Security Vendor



Source: Industry Experts

2.2 MARKET BREAKUP AND DATA TRIANGULATION

FIGURE 7 DATA TRIANGULATION



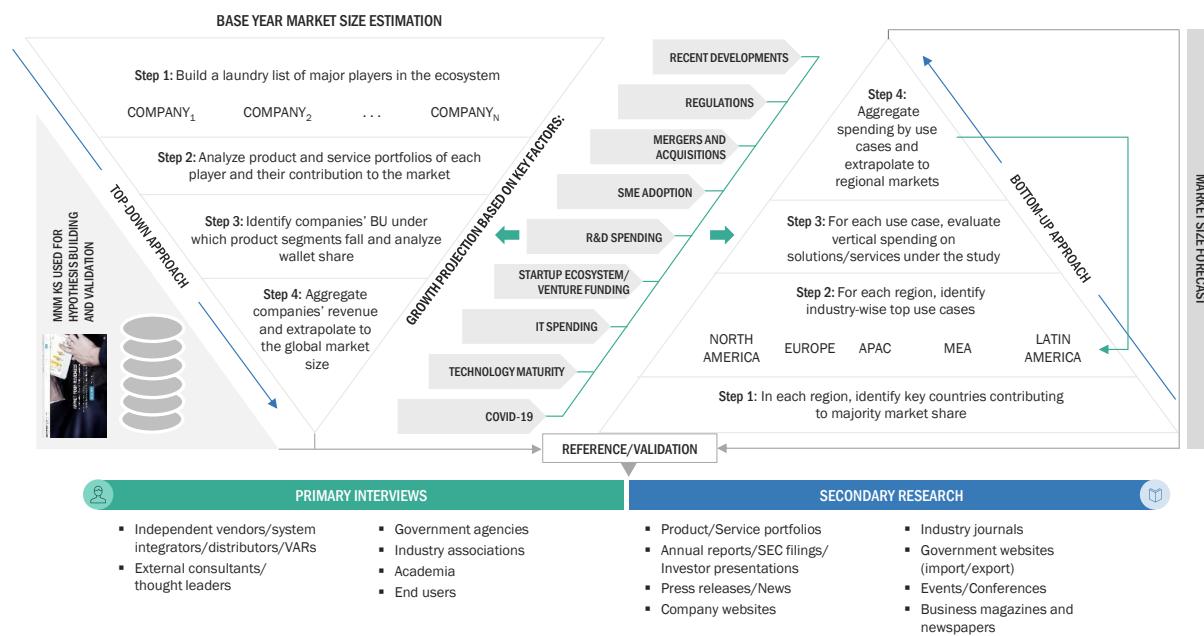
*MnM KNOW stands for MarketsandMarkets' "Knowledge Asset Management" framework. In this context, it stands for existing market research knowledge repository of over 5,000 granular markets, our flagship competitive intelligence, and market research platform Knowledge Store, subject-matter experts, and independent consultants. MnM KNOW acts as an independent source that helps us validate information gathered from primary and secondary sources. MarketsandMarkets reports, such as Interactive Display Market, Interactive Projector Market, LMS Market, Student Information System, and Education and Learning Analytics Market, have been referred for making this report.

Source: MarketsandMarkets Analysis

2.3 MARKET SIZE ESTIMATION

Multiple approaches were adopted for estimating and forecasting the EMM market. The first approach involves the estimation of the market size via the summation of companies' revenue generated through the sales of solutions and services.

FIGURE 8 EMM MARKET: TOP-DOWN AND BOTTOM-UP APPROACHES



Source: MarketsandMarkets Analysis

2.3.1 TOP-DOWN APPROACH

In the top-down approach, an exhaustive list of all the vendors offering solutions and services in the EMM market was prepared. The revenue contribution of the market vendors was estimated through annual reports, press releases, funding, investor presentations, paid databases, and primary interviews. Each vendor's offerings were evaluated based on the breadth of solutions and services, deployment modes, organization size, and verticals. The aggregate of all the companies' revenue was extrapolated to reach the overall market size. Each subsegment was studied and analyzed for its global market size and regional penetration. The markets were triangulated through both primary and secondary research. The primary procedure included extensive interviews for key insights from industry leaders, such as CIOs, CEOs, VPs, directors, and marketing executives. The market numbers were further triangulated with the existing MarketsandMarkets repository for validation.

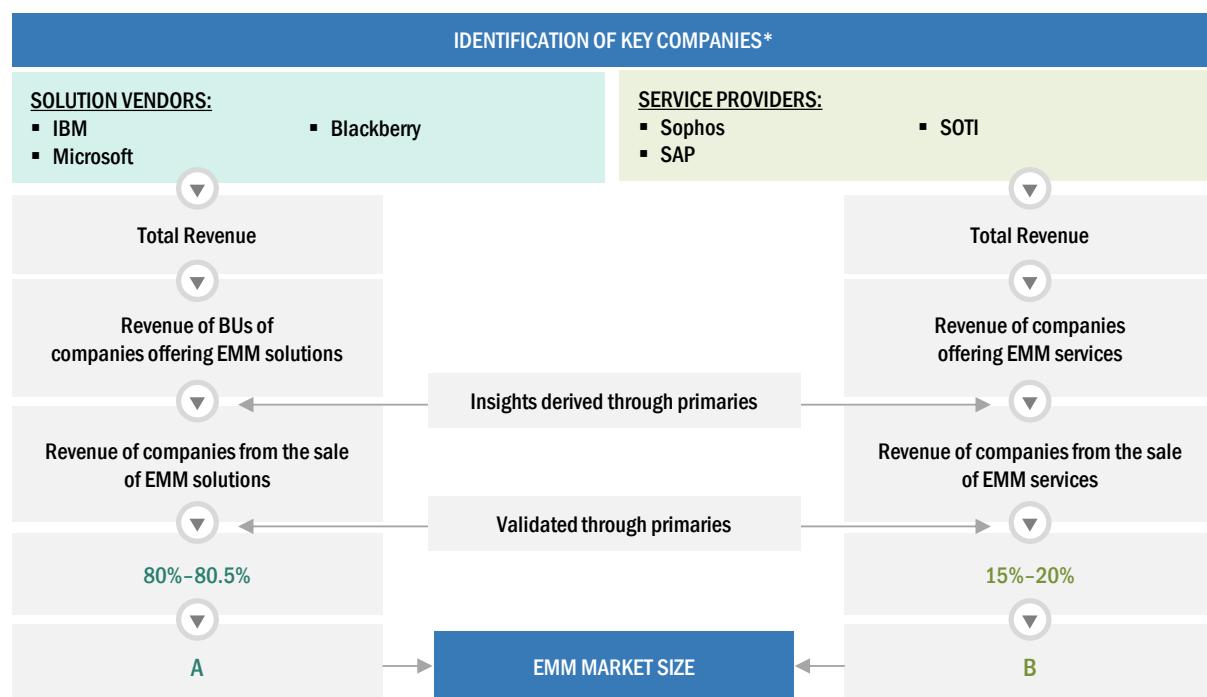
The list of vendors considered for estimating the market size is not limited to the vendors profiled in the report. However, MarketsandMarkets prepared a laundry list of vendors offering EMM solutions and services, and mapped their products related to the EMM market to identify major vendors operating in the market.

2.3.2 BOTTOM-UP APPROACH

In the bottom-up approach, the adoption rate of EMM solutions among different end users in key countries with respect to their regions that contribute the most to the market share was identified. For cross-validation, the adoption of EMM solutions and services among industries, along with different use cases with respect to their regions, was identified and extrapolated. Weightage was given to use cases identified in different regions for the market size calculation.

Based on the market numbers, the regional split was determined by primary and secondary sources. The procedure included the analysis of the EMM market's regional penetration. Based on secondary research, the regional spending on Information and Communications Technology (ICT), socio-economic analysis of each country, strategic vendor analysis of major EMM providers, and organic and inorganic business development activities of regional and global players were estimated. With the data triangulation procedure and validation of data through primaries, the exact values of the overall EMM market size and segments' size were determined and confirmed using the study.

FIGURE 9 MARKET SIZE ESTIMATION METHODOLOGY - APPROACH 1 (SUPPLY-SIDE): REVENUE FROM SOLUTIONS/SERVICES OF THE EMM MARKET



*Key companies should contribute to more than 50% of the total market.

Source: MarketsandMarkets Analysis

FIGURE 10 MARKET SIZE ESTIMATION METHODOLOGY - APPROACH 2, BOTTOM-UP (SUPPLY-SIDE): COLLECTIVE REVENUE FROM ALL SOLUTIONS/SERVICES OF THE EMM MARKET



*Key companies should contribute to more than 50% of the total market.

Source: MarketsandMarkets Analysis

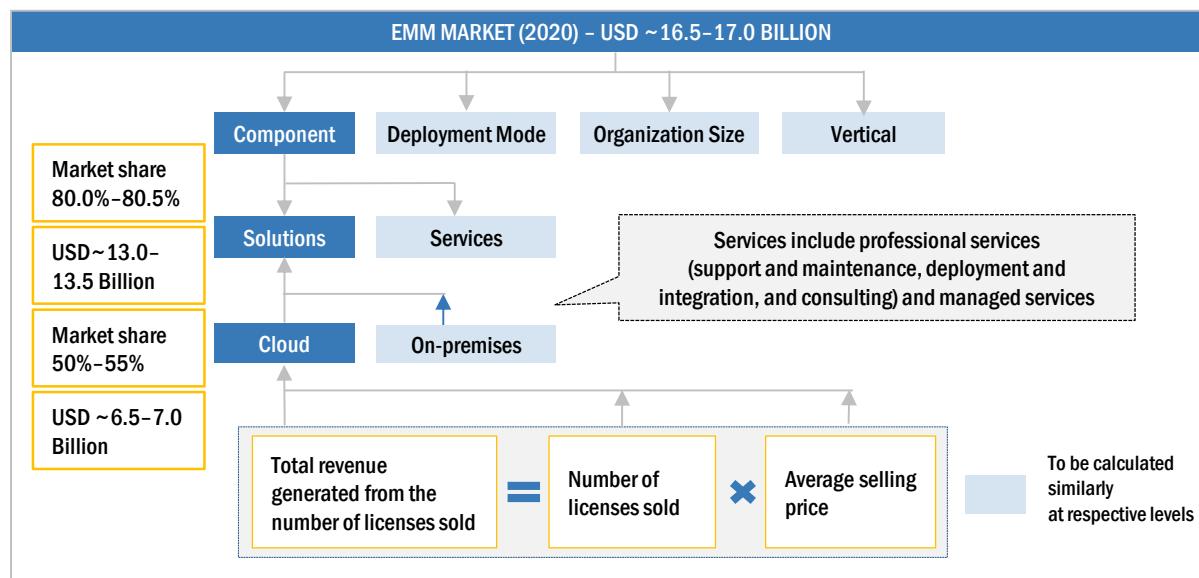
In this approach for market estimation, key EMM solution and service vendors such as VMware, Microsoft, IBM, Blackberry, Citrix, MobileIron, Ivanti, 42Gears, Matrix42, ManageEngine, Snow Software, Sophos, SOTI, SAP, Google, Jamf, Miradore, and Codeproof Technologies were identified. These vendors contribute nearly 45%-55% to the global EMM market. The market is fragmented due to the presence of several vendors. After confirming these companies through primary interviews with industry experts, their total revenue through annual reports, Securities and Exchange Commission (SEC) filings, and paid databases was estimated. The revenue pertaining to Business Units (BUs) that offer EMM solutions was identified through similar sources. Then, through primaries, the data of revenue generated from specific EMM solutions was collected. The collective revenue of key companies that offer EMM solutions comprises 40%-50% of the market, which was again confirmed through primary interviews with industry experts.

FIGURE 11 MARKET SIZE ESTIMATION METHODOLOGY - APPROACH 3, BOTTOM-UP (SUPPLY-SIDE): COLLECTIVE REVENUE FROM ALL SOLUTIONS/SERVICES OF THE EMM MARKET

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
Identification of 30-35 major EMM companies, such as VMware, Microsoft, IBM, BlackBerry, Citrix, MobileIron, Ivanti, 42Gears, Matrix42, ManageEngine, Snow Software, Sophos, SOTI, SAP, Google, Jamf, Miradore, and Codeproof Technologies	Estimation of top players' revenue from BUs offering EMM solutions and services	Identification of the revenue contribution of EMM solutions and services to the relevant BU/BUs	Calculation of the total market size of EMM solutions and services using the combined share of top companies and their revenues	Revalidation of the total market size and market share estimations with primary respondents
KEY SOURCE OF INFORMATION:				
Secondary sources such as company financials, press releases, paid databases (e.g., Factiva), and primary research	Secondary sources such as company financials, press releases, paid databases (e.g., Factiva), and primary research	Primary research (CEOs, VPs, marketing directors, and technology and innovation directors, among other stakeholders)	MarketsandMarkets calculations, company websites, and annual reports	Primary research (directors - product development, VPs - operations, supply chain managers, COOs, and CSOs)

Source: MarketsandMarkets Analysis

FIGURE 12 MARKET SIZE ESTIMATION METHODOLOGY - APPROACH 4, BOTTOM-UP (DEMAND-SIDE): SHARE OF EMM THROUGH OVERALL EMM SPENDING



Source: MarketsandMarkets Analysis

Top-down and bottom-up approaches were used to estimate and validate the size of the EMM market and various other dependent subsegments. The research methodology used to estimate the market size included the following details:

- Key market players were not limited to IBM (US), Microsoft (US), VMware, Microsoft, IBM, Blackberry, Citrix, MobileIron, Ivanti, 42Gears, Matrix42, ManageEngine, Snow Software, Sophos, SOTI, SAP, Google, Jamf, Miradore, and Codeproof Technologies.
- The market players were identified through extensive secondary research, and their revenue contribution in respective regions was determined through primary and secondary research.
- The entire procedure included the study of annual and financial reports of top market players and extensive interviews for key insights from industry leaders, such as CEOs, VPs, directors, and marketing executives.
- All percentage splits and breakups were determined using secondary sources and verified through primary sources.

All the possible parameters that affect the market covered in the research study have been accounted for, viewed in extensive detail, verified through primary research, and analyzed to get the final quantitative and qualitative data. The data is consolidated and added with detailed inputs and analysis from MarketsandMarkets.

2.4 MARKET FORECAST

Key factors that have a direct or indirect impact on the market were analyzed to estimate the overall trend of the market during the forecast period. Each factor was analyzed on a scale of 1–3, 1 being the lowest and 3 being the highest. After analyzing each factor and its impact on the market, various forecasting techniques were used to arrive at the market size.

TABLE 3 FACTOR ANALYSIS

FACTOR	INFERENCE	IMPACT
Recent Developments	Major vendors account for 50%–60% of the developments in the market.	Medium
Regulations	There are various regulations in big data, IoT, and business intelligence industries. However, a few of them only impact the growth of the EMM market. Hence, the regulations factor is projected to have a medium impact on the EMM market.	Medium
SME Adoption	EMM solutions and services are increasingly being adopted by SMEs and enterprises across the globe.	Medium
R&D Spending	Key players operating in the EMM market allocate a significant part of their revenues for R&D to innovate their solutions and meet the emerging demand from customers.	Medium
Startup Ecosystem/ Venture Funding	The number of startups in the EMM market is around 40% as compared to enterprises. Hence, the growth of startups in the EMM market is high. The market is fragmented, and startups offering EMM solutions have witnessed significant investments due to innovative EMM solutions.	Medium
IT Spending	The top three verticals in the EMM market contribute to more than 45% of the overall market share. Various stakeholders across verticals in regions are focusing on adopting EMM solutions to gain a competitive advantage in the global market.	Medium

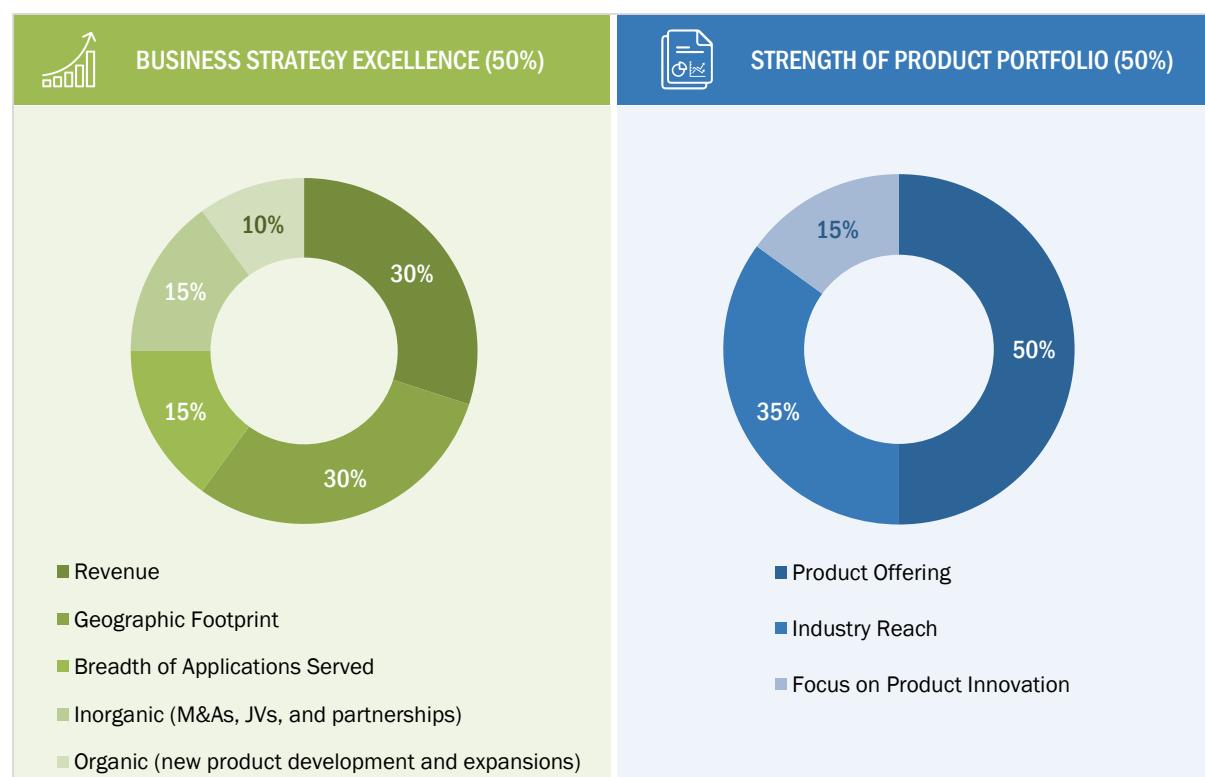
Technology Maturity	The EMM market is in the growth phase. With the increase in the deployment of Internet of Things (IoT) devices, the market is projected to gain traction in the coming years and would near its maturity stage in the next 5–10 years.	Medium
Merger and Acquisition (M&A)	In the last year, there were more than five acquisition-related developments in the EMM market. Hence, the M&A strategy is considered to have a medium impact on the EMM market.	Medium
COVID-19	The recent COVID-19 pandemic is projected to have a minimal impact on the growth of the EMM market. The adoption of EMM solutions has increased among the manufacturing, transportation and logistics, and healthcare and life sciences vertical for vaccine development and patient monitoring worldwide.	Low

Source: MarketsandMarkets Analysis

2.5 COMPANY EVALUATION MATRIX METHODOLOGY

The company evaluation matrix reviews major players offering EMM solutions and services, and outlines findings and analysis based on their core competencies. Vendor evaluations are based on two broad categories: strength of product portfolio and business strategy excellence. Each category has various criteria, based on which vendors are evaluated. The figure given below depicts the criteria and weightage used for scoring the vendors in the EMM market:

FIGURE 13 COMPANY EVALUATION MATRIX: CRITERIA WEIGHTAGE



Source: MarketsandMarkets Analysis

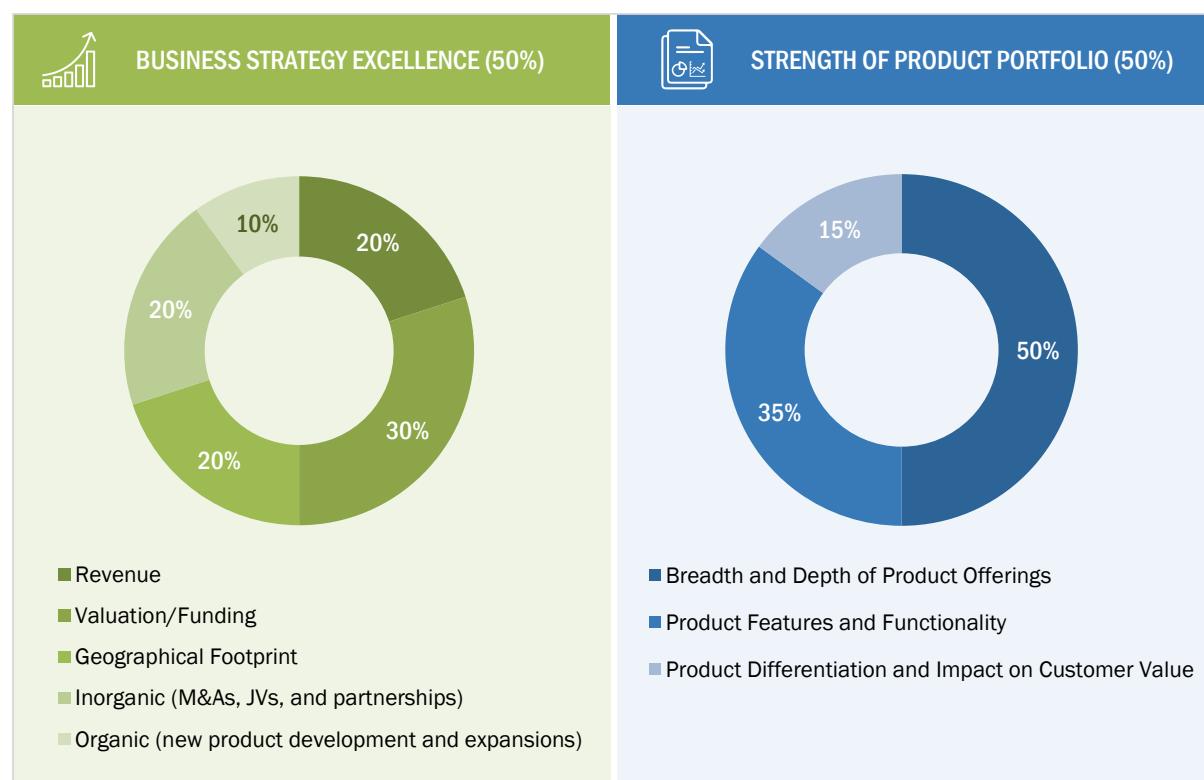
Extensive secondary and primary research was carried out to gather key information about vendors' strength of product portfolio and business strategy excellence based on a questionnaire. A scale of 0–10 was formulated for each question, after which each criterion for every vendor was scored based on the collected information. After the completion of the data gathering and verification process, the scores and weightage for shortlisted vendors against each parameter were finalized. A comparison scorecard was prepared after evaluating all the vendors, and each vendor was placed in the company evaluation matrix based on its strength of product portfolio and business strategy excellence scores.

2.6 STARTUP/SME EVALUATION MATRIX METHODOLOGY

The startup/Small and Medium-sized Enterprises (SMEs) evaluation matrix reviews startups/SMEs offering EMM solutions and services. Seven startups/SMEs founded after 2015 were considered for evaluation in the startup/SME evaluation matrix.

The figure below depicts the criteria and weightage used for scoring startups/SMEs in the EMM market.

FIGURE 14 STARTUP/SME EVALUATION MATRIX: CRITERIA WEIGHTAGE



Source: MarketsandMarkets Analysis

2.7 ASSUMPTIONS FOR THE STUDY

The following assumptions were taken into consideration to complete the overall market estimation of the EMM market:

FACTOR	ASSUMPTION	IMPACT
Economy	According to an update released by the International Monetary Fund (IMF) in October 2020, the global economy was projected to contract by 4.4% in 2020. The IMF's forecast assumes that social distancing due to the coronavirus pandemic will continue in 2021, and local transmission will fall everywhere by the end of 2022.	According to the IMF, in 2021, the global growth is projected to rebound to 5.2%, -0.2% points below the June projection. A positive global economy is projected to continue until the end of 2026. In developed countries, a modest and uneven recovery is expected to continue with the gradual narrowing of output gaps.
Exchange Rate	MarketsandMarkets assumes that dollar fluctuations would not be serious enough to affect the forecast period to a significant extent.	A fall in the dollar value is projected to create revenue growth opportunities for the US multinationals, whereas stability in the dollar value is projected to stabilize the price of imports and exports.
Financial Statistics	MarketsandMarkets extracts all the revenue and financial insights from company websites or annual reports.	It ensures the authenticity of financials mentioned in reports.
Solutions	Solution spending has increased over the last two years, and organizations are investing in adopting solutions to achieve digital transformation.	Organizations are expected to increase their spending on IT and business services.
Services	The growth of the services segment has been steady. Government austerity programs have included direct reductions in the level of IT services spending. Cannibalization from cloud is still projected to be a drag on the overall growth. On the upside, it is expected that some downstream spending from solutions might happen, but lesser than previous cycles.	Solution spending would increase the adoption of services.
COVID-19	MarketsandMarkets assumes a short-term effect on the technology sector, affecting the electronics value chain and initiating an inflationary risk on products. MarketsandMarkets assumes delays in scheduled new projects and reduced discretionary spending by enterprises.	The impact of COVID-19 is believed to be short-term and may have a minimal effect on the forecast period.

	The pricing trend is assumed to vary over time.	
	All the forecasts are made with the standard assumption that the accepted currency is USD.	
	For the conversion of various currencies to USD, average historical exchange rates are used according to the year specified. For all the historical and current exchange rates required for calculations and currency conversions, the US Internal Revenue Service's website is used.	
Market Estimation	All the forecasts are made under the standard assumption that the globally accepted currency (USD) remains constant during the next five years. Vendor-side analysis: The market size estimates of associated solutions and services are factored in from the vendor side by assuming an average of licensing and subscription-based models of leading and innovative vendors in the market.	NA

Source: MarketsandMarkets Analysis

2.8 LIMITATIONS OF THE STUDY

The following limitations were taken into consideration to complete the overall market engineering process of the EMM market:

METHODOLOGY-RELATED LIMITATIONS 	<ul style="list-style-type: none"> ▪ The report mainly focuses on offerings of major vendors in the EMM market. The market size estimation is done based on the approximation of the market ranking/contribution of these vendors, along with corresponding investments by various regulatory bodies in the market. ▪ The overall market size is arrived at using a holistic and systematic approach.
SCOPE-RELATED LIMITATIONS 	<ul style="list-style-type: none"> ▪ Hardware components in the EMM market are not considered for quantifying the market. ▪ The report is focused on the B2B business model; the B2C model is not considered.

Source: MarketsandMarkets Analysis

2.9 IMPLICATIONS OF COVID-19 ON THE ENTERPRISE MOBILITY MANAGEMENT MARKET

The impact of COVID-19 on the EMM market was evaluated globally. The pandemic led to changes in the entire business equation across organizations. Several factors were considered while computing the market size during the forecast period.

FIGURE 15 QUARTERLY IMPACT OF COVID-19 DURING 2020–2021



Note: COVID-19 related inputs have been included in various sections of the report to showcase the impact of COVID-19 on the enterprise mobility management market.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

IMPACT OF THE COVID-19 PANDEMIC:

- Supply side
 - Movement restrictions have led to increased data usage. Telecommunications companies are working to increase network resiliency and analyze the impact of COVID-19 on their planned investments.
 - The global spread of COVID-19 has generated several privacy, data protection, security, and compliance questions. These challenges have increased the need for companies and organizations to secure and analyze their sensitive data for strategic business decisions.

- New practices such as work from home and social distancing have led to the requirement of EMM solutions and services, and the development of digital infrastructures for large-scale technology deployments.
- Cloud-based EMM and analytics solutions are playing a major role in discovering sensitive data during the pandemic. These solutions can help in stabilizing businesses for laying the foundations of new processes and predicting what is next through collecting and analyzing, and discovering sensitive data from various sources. Therefore, it is critical that companies have short-, medium, and long-term data-driven plans as quickly as possible to make informed decisions.
- EMM solution and service providers expect to witness growth in the demand due to lockdowns imposed worldwide. Healthcare and life sciences, and BFSI verticals are the least impacted by COVID-19 and witnessing the adoption of EMM solutions.
- Demand side
 - Enterprises have witnessed a reduction in their operational spending and are now focusing more on business continuity and sustainability.
 - Core verticals such as BFSI, manufacturing, healthcare and life sciences, and IT and telecom are preferring advanced technologies, such as cloud, AI, big data analytics, IoT, and blockchain, for accelerating their digital transformation journey.
 - Verticals such as travel and hospitality, and manufacturing were significantly impacted in the first and second quarters of 2020.
 - Healthcare providers are leveraging data from countries that were affected earlier by the pandemic for predicting requirements, such as hospital beds, masks, and ventilators. Business retailers are utilizing Point-Of-Sale (POS) data to help distributors in identifying and shipping items most important to their customers. Telecommunications and IT providers are using network traffic data to monitor and manage network capacity, build predictive capacity models, identify bottlenecks, and prioritize and plan network expansion decisions.
 - The demand for managed services is attributed to the rise in the adoption of the work from home strategy by various companies. This strategy has driven the demand for EMM managed services in the market. Businesses are adopting EMM solutions for examining large amounts of data and uncovering hidden patterns, correlations, and other insights.
- Dynamics
 - The global supply chain is witnessing the need for visibility and synchronization during the COVID-19 pandemic. EMM and analytics in the supply chain can help in driving business growth to the next level, providing the fuel for analytics tools to predict and plan for issues before they occur. By identifying patterns in unrelated factors, businesses are in a better position to make immediate and effective decisions than ever before.
 - Due to COVID-19, people are practicing social distancing; most of them are using e-commerce platforms for their daily necessities. These e-commerce platforms have witnessed fast growth in the usage of big data analytics for enhancing and customizing customer experiences.
 - The Information Technology (IT) Act 2000 read with IT (reasonable security practices and procedures, and sensitive personal data or information) Rules 2011 (sensitive personal data rules) is the principal legislation governing the collection and processing of personal information and sensitive personal data or information (sensitive personal data) on a sector-neutral basis.

- To mitigate the impact of COVID-19, organizations may need to process more (personal) data or process it differently to ensure data security. For instance, collecting information about possibly affected workforce or processing data to monitor the location of teams to ensure the security and safety of people and the broader business. While principles such as proportionality, lawfulness, transparency, and security continue to apply, the General Data Protection Regulation (GDPR) provides a certain level of flexibility under its risk-based approach to enable companies to face crisis and challenges while in compliance with data protection and privacy rules.

■ Government Initiatives

- Several government institutions have the long-standing goal of leveraging the insurance industry to incentivize the adoption of improved cyber risk management practices across private and public sectors. The UK, Australia, North America, and Europe have adopted data breach notification laws that require companies to disclose data breaches to impacted individuals and relevant authorities
- Identification to assist organizations to meet compliance requirements specified in GDPR and Personal Information Protection (PIP)
- The announcement of stimulus packages by various government organizations is expected to boost the overall economy of businesses in the third and fourth quarters of 2020
- The governments have started focusing on digital channels. Banks have shifted to remote sales and service teams and launched digital outreach to customers to make flexible payment arrangements for loans and mortgages

3 EXECUTIVE SUMMARY

EMM is essential in creating and maintaining an effective data security plan. With the rapid adoption of cloud and the rising number of remote workers, organizations are no longer only concerned with sensitive data stored solely on-premises. Data can travel through multiple paths. This is where EMM comes into the picture and makes data security management easier for businesses. Along with security and risk management, and compliance management, other benefits of EMM include the decrease in data storage spend and reduced sensitive data footprint.

The EMM market is projected to witness a slowdown in its growth in 2020 due to COVID-19 lockdowns imposed worldwide. These lockdowns have been impacting all verticals, including manufacturing, retail, and government. Manufacturing and retail are the worst-hit verticals. The availability of essential items has been impacted due to the lack of manpower to manufacture these items and transport them, even though essential items have been exempted from lockdowns. The condition would come under control by early 2021. The demand for EMM solutions and services is expected to increase due to more data generation, focus on data security, the demand for remote health monitoring of individuals and assets, and predictive asset maintenance. Businesses in various verticals are already planning to deploy a diverse array of EMM solutions for carrying out the digital transformation of mission-critical processes, which would improve their operations and strengthen customer relationships. The reduction in infrastructure and operational costs, enhancement in data security and privacy, increase in operational visibility for various processes, and improvement in real-time business decision-making are key business and operational priorities of enterprises that are expected to drive the adoption of EMM solutions worldwide.

Key factors such as the growing need for administrators centrally manage employee access and protecting data with next-generation security protocols, increasing investments in data privacy measures with evolving data privacy regulations, and rise in remote workers and real-time data access are expected to drive the demand for EMM solutions and services. The rising demand to integrate comprehensive access and control policies across apps and devices with business processes, and the need for data utilization across verticals due to COVID-19 are expected to provide market growth opportunities for leading companies. However, key factors such as difficulties in justifying ROI from EMM solutions and the lack of skilled professional workforce are projected to inhibit the market growth. Data security and privacy concerns, and incoherency in enterprise-wide data management standards and governance are key challenges encouraging the adoption of EMM solutions and services.

North America is estimated to account for the largest share of the EMM market during the forecast period. It is projected to be followed by Europe. The growth of the market in these regions is attributed to technology infrastructure advancements across verticals. As an early adopter of technologies, North America is an innovation hub and is projected to offer significant growth opportunities for vendors offering EMM solutions and services. The EMM market in APAC is projected to grow at the highest CAGR from 2020 to 2026. The increase in adoption of emerging technologies, such as big data analytics, AI, IoT, and blockchain, in key countries such as China, India, and Japan has led to a large volume of data generation amidst the pandemic, thereby driving the growth of the EMM market in the region. Technology advancements and digitization in countries such as China and India are also projected to drive the demand for EMM solutions from key verticals, such as Banking, Financial Services, and Insurance (BFSI), healthcare and life sciences, retail, government, and manufacturing. Businesses are focusing on helping customers maintain business continuity and maximize their distributed workforce strategy with scalable digital-first infrastructure, flexible virtualization solutions, and intelligent and secure device management that keeps employees productive and engaged anytime, anywhere. The growth of the EMM market in the MEA region is attributed to the increase in adoption of IoT and cloud in the region, and the demand for simplified and enhanced data management tools.

Companies are adopting EMM solutions and services to support customers migrating from traditional network-based Client Management Tools (CMT) to modern UEM-based PC support, while ensuring data security to enable secure access to corporate applications and resources.

Based on solutions, the mobile device management segment is projected to account for a major share in the EMM market during the forecast period. The increase in the need to manage different types of business-related data on mobile devices across verticals is a key factor driving the growth of the EMM market in this segment. This growth is also attributed to the focus of companies on reducing cyber threats and hacking to maintain data confidentiality, integrity, and availability across IT infrastructure. The identity and access management segment is projected to record the highest CAGR during the forecast period. EMM solutions enable businesses to uphold the legal compliance of data protection laws, such as General Data Protection Regulation (GDPR), Health Insurance Portability and Accountability Act (HIPAA), California Consumer Privacy Act (CCPA), New York's Stop Hacks, and Improve Electronic Data Security (SHIELD) Act.

The EMM market is segmented into components, organization size, deployment modes, and verticals. Based on component, the market is segmented into solutions and services. Services include professional services and managed services. Professional services are further segmented into consulting, support and maintenance, and deployment and integration. The organization size segment is divided into large enterprises and Small and Medium-sized Enterprises (SMEs). The deployment mode segment includes cloud and on-premises subsegments. The solution segment is divided into MDM, MAM, MCM, identity and access management, and mobile expense management. Verticals include BFSI, government, healthcare and life sciences, retail, manufacturing, telecommunications and IT, and other verticals (education, media and entertainment). The market is studied for North America, Europe, APAC, MEA, and Latin America.

Some of the key players operating in the EMM market are Microsoft Corporation (Microsoft), BlackBerry Limited (BlackBerry), Citrix Systems Inc. (Citrix), IBM Corporation (IBM), ManageEngine, a Zoho Corporation company (ManageEngine), MobileIron Inc. (MobileIron), SAP SE (SAP), Sophos Ltd (Sophos), SOTI Inc. (SOTI), VMware Inc. (VMware), and many more.

The EMM market is projected to grow from USD 16,571 million in 2020 to USD 63,618 million by 2026, recording a CAGR of 25.1% during the forecast period.

TABLE 4 GLOBAL ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE AND GROWTH RATE, 2016–2019 (USD MILLION, Y-O-Y%)

EMM Market	2016	2017	2018	2019	CAGR (2016–2019)
Market Size	6,512	8,285	10,509	13,310	26.9%
Y-o-Y (%)		27.2%	26.9%	26.7%	

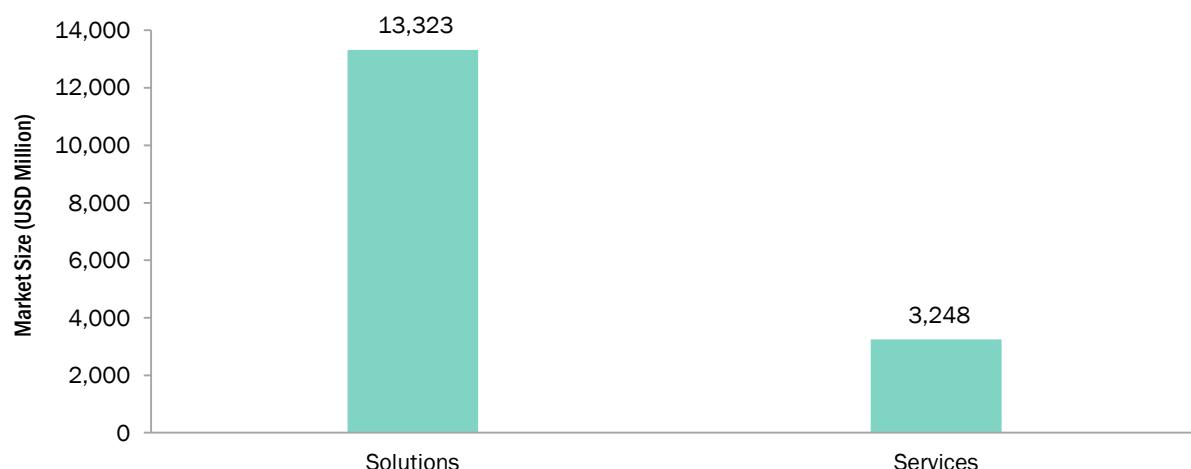
Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 5 GLOBAL ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE AND GROWTH RATE, 2020–2026 (USD MILLION, Y-O-Y%)

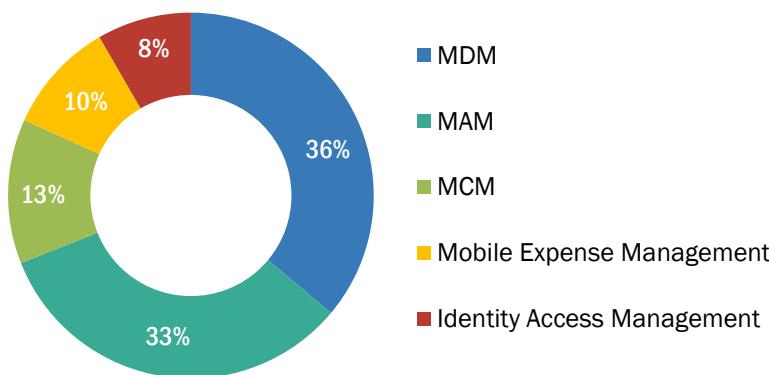
EMM Market	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Market Size	16,571	20,681	25,861	32,391	40,651	50,895	63,618	25.1%
Y-o-Y	24.5%	24.8%	25.1%	25.3%	25.5%	25.2%	25.0%	

e: estimated; p: projected

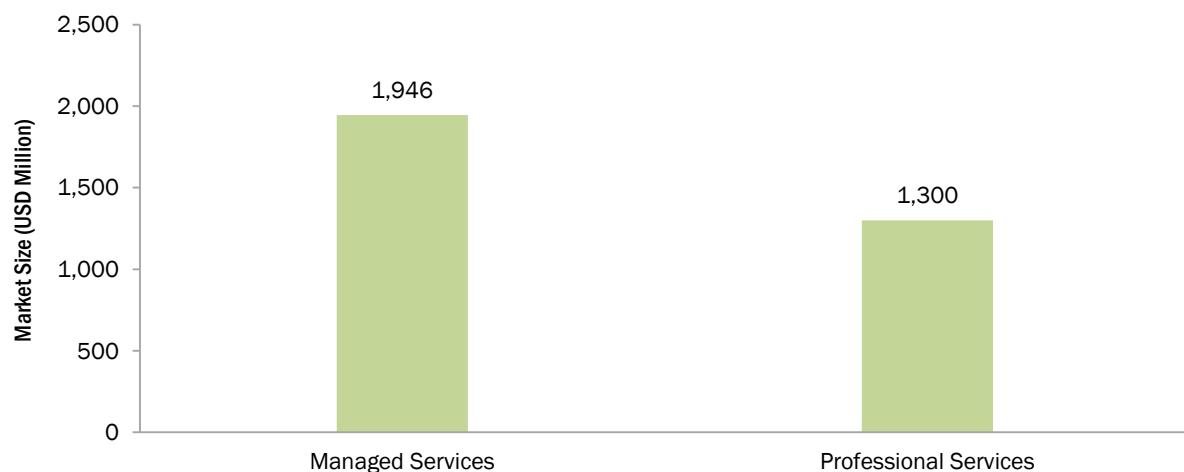
Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

FIGURE 16 SOLUTIONS SEGMENT TO HOLD A LARGER MARKET SIZE IN 2020

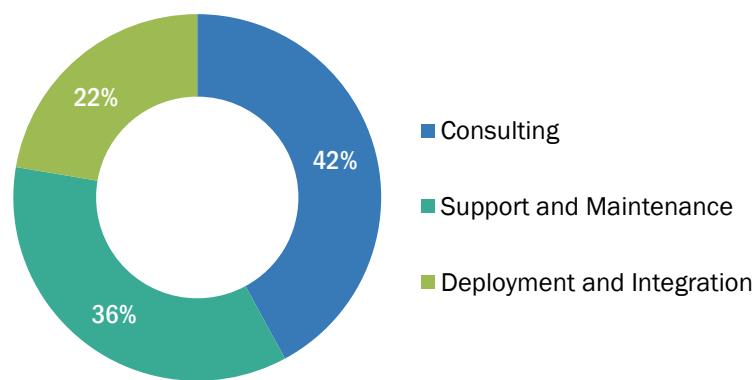
Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

FIGURE 17 MOBILE DEVICE MANAGEMENT SEGMENT TO HOLD A LARGER MARKET SHARE IN 2020

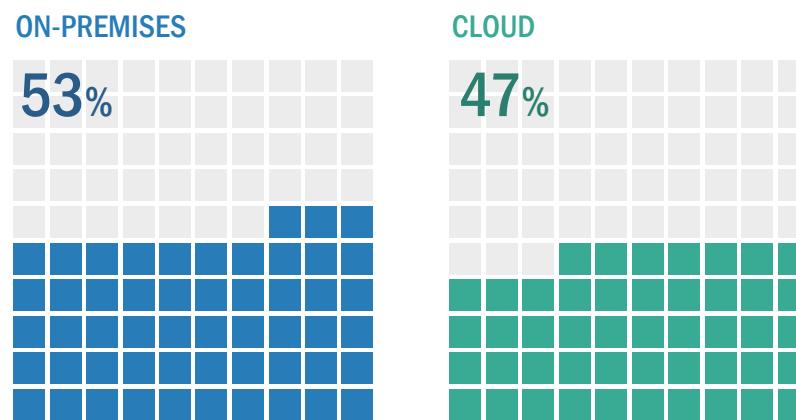
Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

FIGURE 18 MANAGED SERVICES SEGMENT TO HOLD A LARGER MARKET SIZE IN 2020

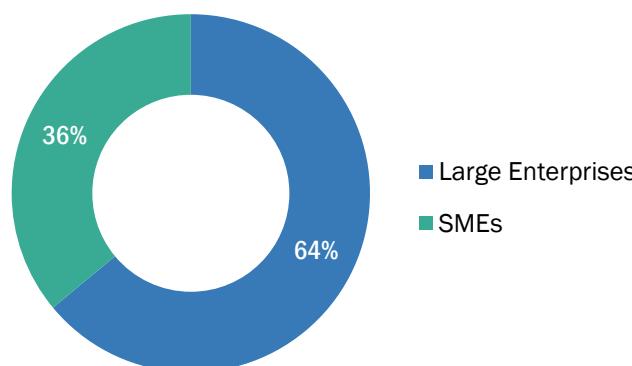
Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

FIGURE 19 CONSULTING SEGMENT TO HOLD THE LARGEST MARKET SHARE IN 2020

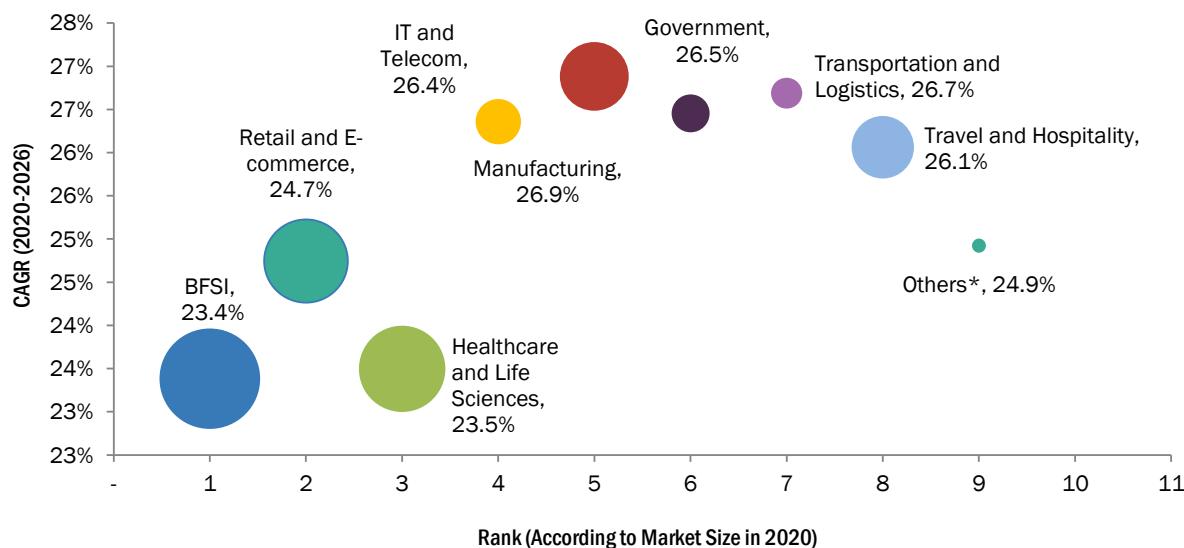
Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

FIGURE 20 ON-PREMISES SEGMENT TO HOLD A LARGER MARKET SHARE IN 2020

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

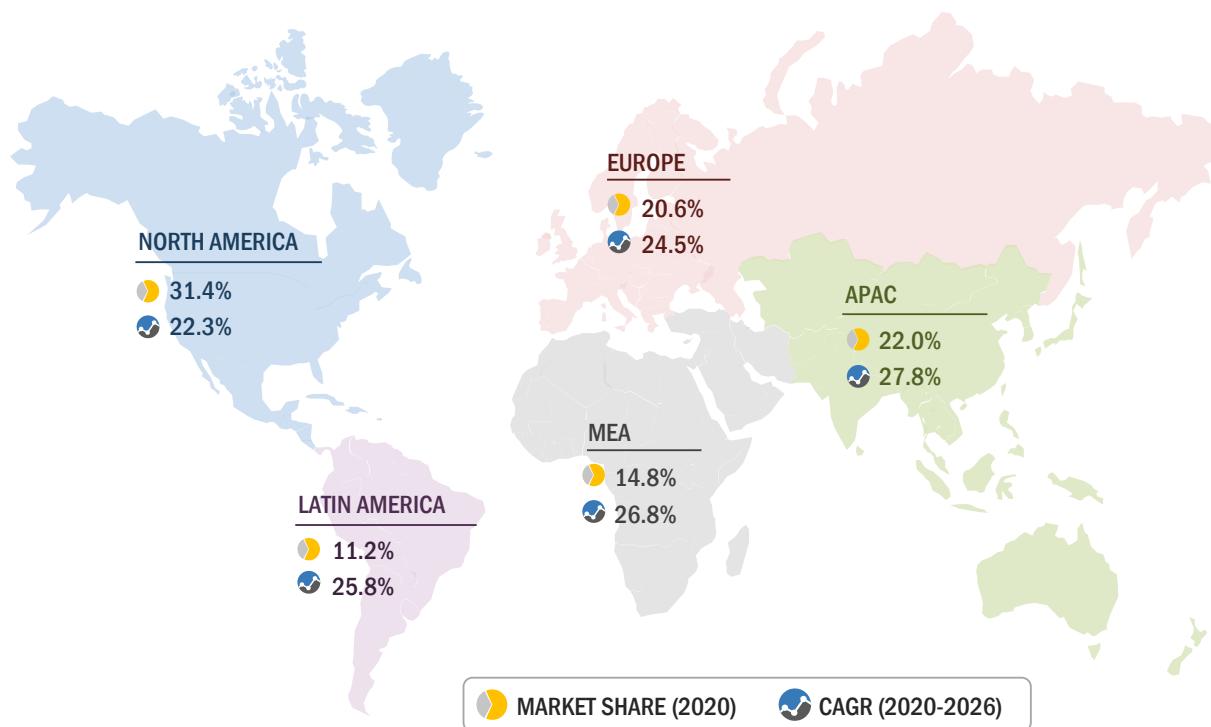
FIGURE 21 LARGE ENTERPRISES SEGMENT TO HOLD A LARGER MARKET SHARE IN 2020

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

FIGURE 22 BANKING, INSURANCE, AND FINANCIAL SERVICES VERTICAL TO HOLD THE LARGEST MARKET SHARE IN 2020

*Others include education, media and entertainment, and energy and utilities.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

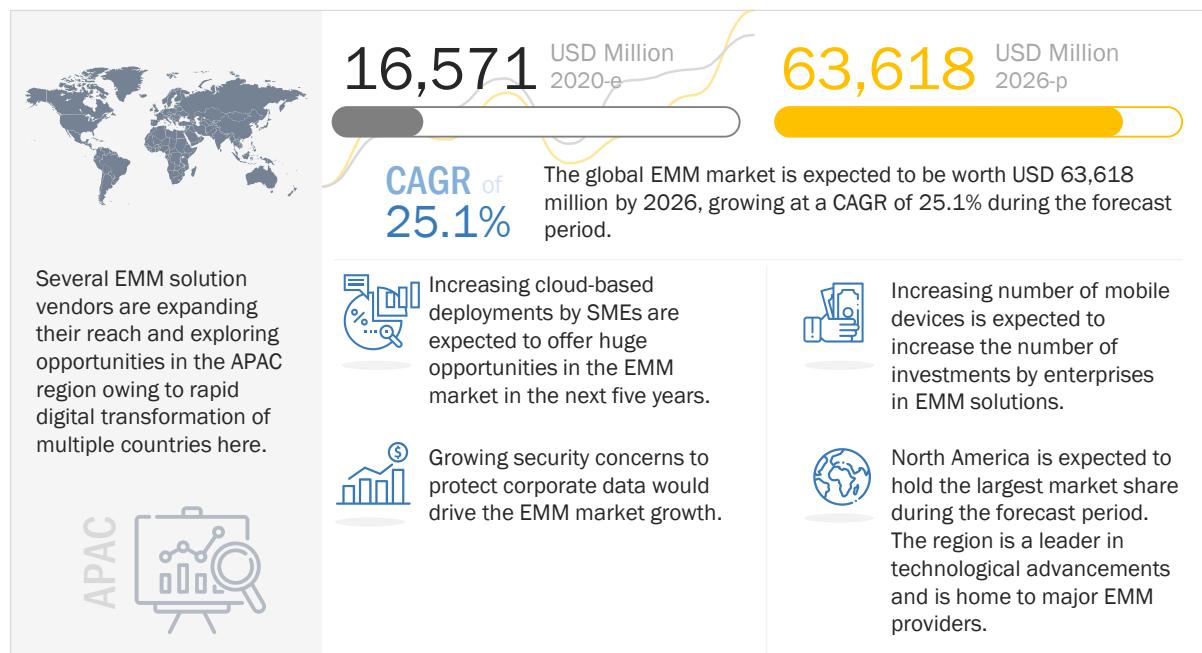
FIGURE 23 ASIA PACIFIC TO GROW AT THE HIGHEST CAGR DURING THE FORECAST PERIOD

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

4 PREMIUM INSIGHTS

4.1 ATTRACTIVE OPPORTUNITIES IN THE EMM MARKET

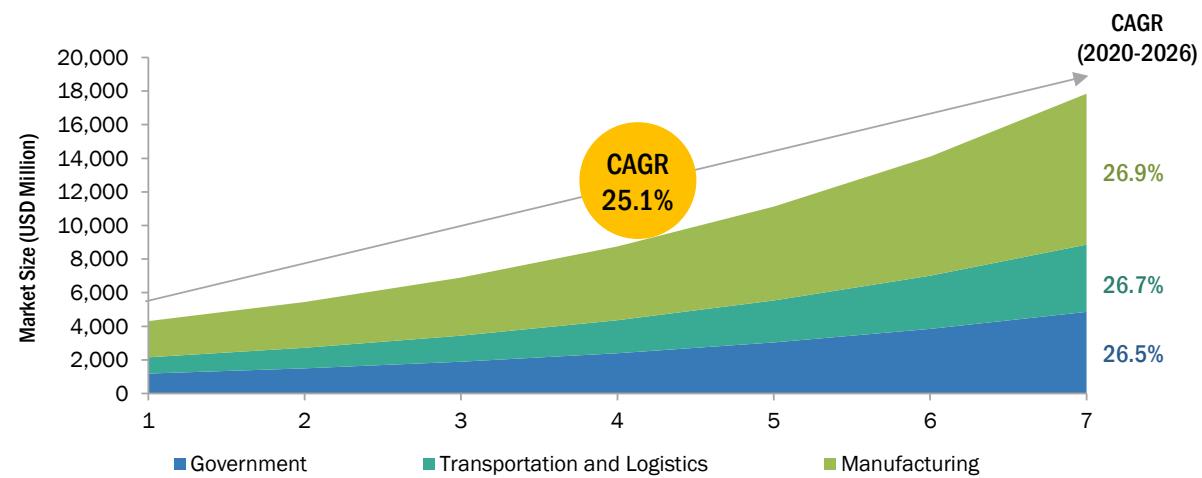
FIGURE 24 EMERGING TRENDS OF DEVICE FLEXIBILITY FOR USERS WHILE RETAINING CONTROL FOR IT TO DRIVE MARKET GROWTH



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

4.2 ENTERPRISE MOBILITY MANAGEMENT MARKET: TOP THREE VERTICALS

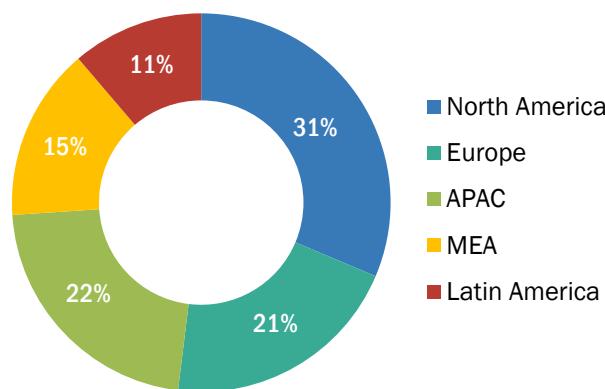
FIGURE 25 MANUFACTURING SEGMENT TO GROW AT THE HIGHEST CAGR FROM 2020 TO 2026



Source: Investor Presentations, Expert Interviews, and MarketsandMarkets Analysis

4.3 ENTERPRISE MOBILITY MANAGEMENT MARKET, BY REGION

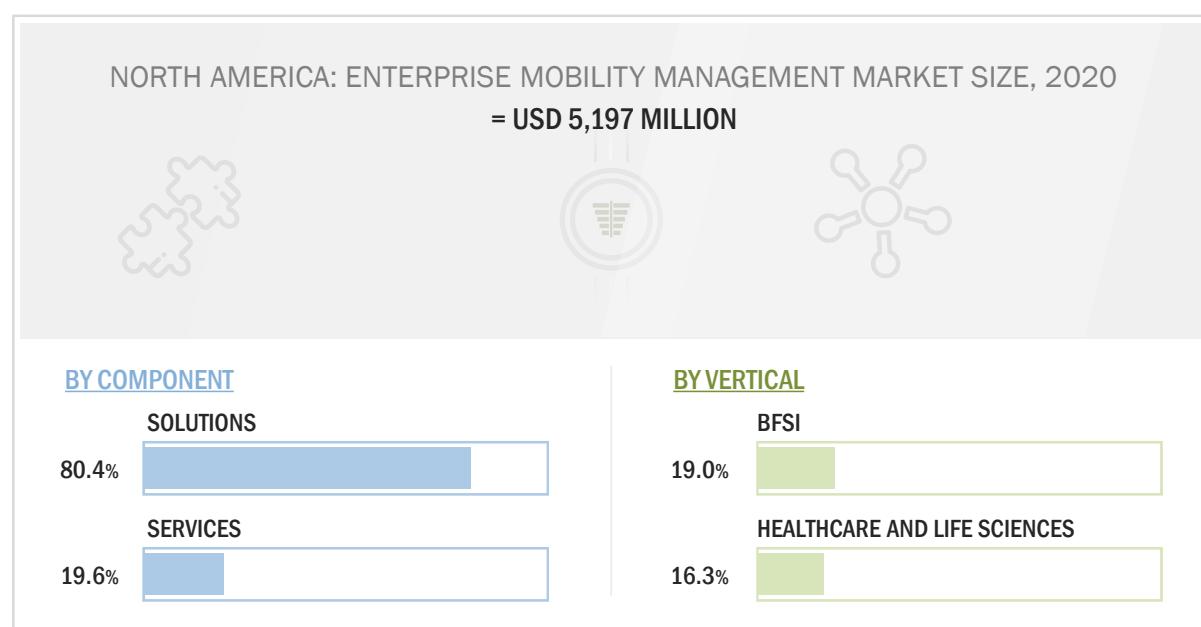
FIGURE 26 NORTH AMERICA ACCOUNTED FOR THE LARGEST SHARE IN THE EMM MARKET IN 2020



Source: *Investor Presentations, Expert Interviews, and MarketsandMarkets Analysis*

4.4 NORTH AMERICAN EMM MARKET, BY COMPONENT AND VERTICAL

FIGURE 27 SOLUTIONS AND BFSI SEGMENTS ACCOUNTED FOR LARGE MARKET SHARES IN 2020



Source: *Secondary Research, Expert Interviews, and MarketsandMarkets Analysis*

5 MARKET OVERVIEW AND INDUSTRY TRENDS

5.1 INTRODUCTION

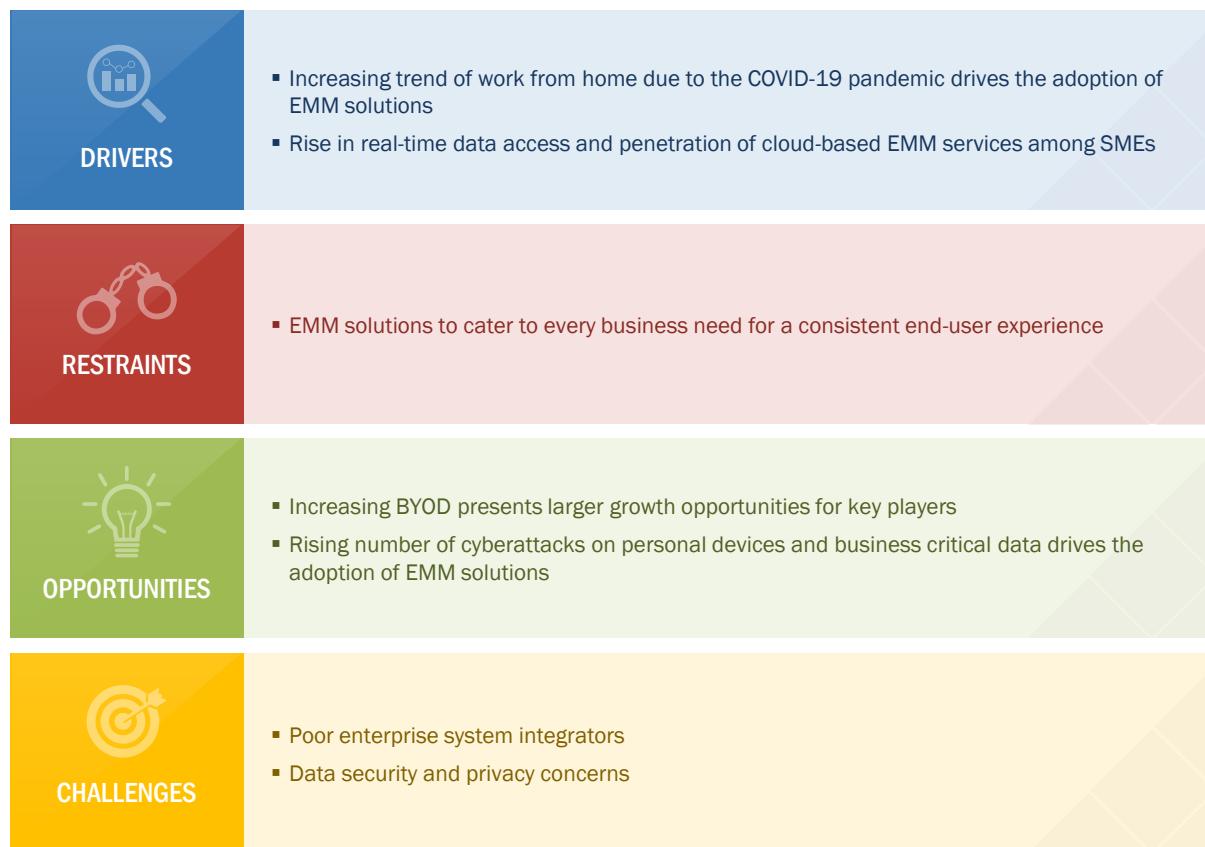
The enterprise requirements for EMM solutions are quickly evolving as business organizations are deploying an increasing number of complex device types, OS, and applications to support an ever-expanding mobile workforce. The right EMM solution can help IT admins to effectively and efficiently handle the growing number of devices, application compliance, and address data security challenges faced by several enterprises. Businesses worldwide have adopted EMM solutions to streamline their processes and enhance productivity and efficiency to gain a competitive advantage over others. In addition, it simplifies the business processes of an organization and offers access to employees to gain real-time information. EMM also provides a simplified and efficient way to view and manage all devices from the central admin console. Some features of EMM solutions are security, policy enforcement, and application management across multiple OS, devices, and form factors.

Major market players, such as BlackBerry, VMware, IBM, Microsoft, and MobileIron, have adopted numerous growth strategies, which include acquisitions, new product launches, product enhancements, and business expansions, to enhance their market shares. The chapter discusses market drivers, restraints, opportunities, and challenges, and mentions the impact of these parameters on the market. It also includes use cases and the regulatory landscape, related to the EMM market.

5.2 MARKET DYNAMICS

The section below represents key information on drivers, challenges, opportunities, and restraining factors that are affecting the market growth. The market has shown significant growth over the last few years worldwide. Several factors, such as the immense growth of the mobile workforce and BYOD within enterprises, the proliferation of new mobile devices in the market, and rising security concerns to protect enormous corporate data, are expected to fuel the growth of the market. However, stringent government rules and regulations are expected to limit the market's growth. The availability of immense new opportunities for EMM solution vendors would further shape the future of this market. These opportunities include leveraging user and entity behavior analytics into EMM solutions and 5G and transforming the importance of mobile devices. EMM solution providers face various challenges owing to the growing number of mobile devices, different firmware, and different OS versions available.

**FIGURE 28 DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES:
ENTERPRISE MOBILITY MANAGEMENT MARKET**



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

5.2.1 DRIVERS

5.2.1.1 Increasing trend of work from home due to the COVID-19 pandemic drives the adoption of EMM solutions

 DRIVER	<p>In July 2020, According to a recent survey by ManageEngine Survey Finds 72% of IT Professionals State ITSM Continues to Be Effective in a Remote Work Environment.</p>
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With the COVID-19 pandemic, more companies are adopting remote work practices. The demand for mobility in the current workforce is on the rise, particularly due to the impact of the COVID-19 pandemic that is driving the shift to remote working. Adoption of EMM solutions is on the rise as these solutions give companies the option to control, update, and even wipe data off of devices from a distance. Remote workforces and MDM are more important than ever in 2020's pandemic reality. Unmanaged remote endpoints are one of the biggest risks to an organization's cybersecurity posture today. Enterprises have spent large amounts of money over the past several months rolling out more robust VPN solutions and mobile devices (laptops and tablets) for users to be able to perform their jobs remotely, while security has seemingly taken a backseat to these larger efforts to keep workforces employed and productive. For instance, the demand for mobile device management solutions in the Apple space is surging, as the pandemic drives forward the transition even as an increasing number of enterprises move to adopt Macs, iPhones, and iPads in their business. EMM solutions also offer remote wiping that can irretrievably erase any content in the device with the help of a trigger if loss or theft of the device is identified, further preventing loss of critical data. The need for MDM and the ability to detect and remediate vulnerabilities on remote endpoints is now a necessity rather than a convenience.

5.2.1.2 Rise in real-time data access and penetration of cloud-based EMM services among SMEs

Cloud-based EMM services are gaining momentum across various industry verticals. This drives the penetration of cloud-based EMM services among SMEs. Moreover, SMEs have embraced BYOD faster than large enterprises. They are embracing strong mobility strategy, driving employee productivity and innovation. With the help of cloud-based EMM solutions and services, SMEs can rapidly deploy a mobility solution without worrying about security management aspects and concerns around scaling the deployment. Additionally, SMEs are saving costs and huge capital investments by adopting cloud-based EMM solutions. Most SMEs across the retail industry such as small shop owners or franchises entirely run through mobile devices, where employees use smartphones for scheduling work, taking payments, and communicating with their customers. With this, there is a growing focus to adopt unified endpoint management and enterprise mobility management solution to manage devices, and data used in these devices and mobile apps. Cloud-based mobile application management allows SMEs to set policies and controls around apps, emails, messaging, and other business tools. The growing need among SMEs for efficient device control, application management, administration, and user policy management is boosting the adoption of cloud-based EMM services within the SME landscape.



DRIVER

According to International Data Group (IDG), by 2025, there will be 163 zettabytes of data in the world, and estimates indicate that 80% of this data is unstructured.

According to a study, 54% of enterprises state that cloud EMM is either critical or important to their current and future strategies. Enterprises migrate toward cloud to use easy deployments and faster processing speeds and facilitate ease of use. Cloud deployments allow end users to obtain real-time access to business-critical data, which is projected to drive the sensitive EMM market growth.

In May 2020, MariaDB conducted a global survey that looked at the initial COVID-19 impact on businesses moving to cloud. According to the survey, 40% of respondents said that the outbreak of COVID-19 has led to high adoption of cloud services. The COVID-19 pandemic witnesses an increase in the usage of cloud computing platforms. Organizations are focusing on opting for permanent work-from-home options, which is possibly the ‘new normal,’ particularly among tech companies. According to companies affected due to COVID-19 and with the probability of future disruptions, COVID-19 has encouraged them to adopt cloud services.

5.2.2 RESTRAINTS

5.2.2.1 EMM solutions to cater to every business need for a consistent end-user experience

Vendors that offer EMM solutions are unable to customize the solution as per specific business requirements. Enterprises often complain about the inability of the EMM solution to address flexibility and agility with multi-user connections. Every business has different security needs for mobile devices that gain access to the corporate network. Vendors also face several challenges while integrating EMM into an organization’s existing security and management controls and workflows. However, the right EMM solution can enhance both security and efficiency, allowing an IT admin to control and monitor systems from a single access point. Every company is different with varying business needs and gaining an accurate awareness of what a company requires is extremely challenging. Since the needs of every company would differ, the implementation of EMM solutions should also be different for a consistent end-user experience.

5.2.3 OPPORTUNITIES

5.2.3.1 Increasing BYOD presents larger growth opportunities for key players

Most companies allow employee-owned smartphones or tablets to be used at work. This movement renders significant productivity, convenience, and cost benefits, but at the same time, it leads to serious challenges for IT administrators. Employees often avoid corporate security policies, and it is not possible for the organization to install and manage security software on every mobile device. Enterprises demand in-depth internal security monitoring solutions that detect issues and retrieve information from any device on the network. A 24/7 monitoring of enterprise airspace and network is demanded by most organizations. For instance, AirWatch provides a flexible model for asset management, distributing applications, and content in a secured way.



OPPORTUNITIES

According to a recent survey by Cisco Internet Business Solutions Group (IBSG) Horizons, 89 percent of IT companies support use of mobile devices for business in some form.

5.2.3.2 Rising number of cyberattacks on personal devices and business-critical data drives the adoption of EMM solutions

According to Lookout's report, enterprise mobile phishing attacks have increased over time. Since Q4 2019, enterprise mobile phishing attack rates have grown about 37% globally. The US has seen some of the worst of it, with a 66% increase since the end of 2019. As more mobile devices are deployed in the workplace, phishing attacks that target those devices are becoming more common, creating a need to train employees on proper mobile security protocols.



OPPORTUNITIES

According to Cisco Data Privacy Benchmark Study 2020, most organizations are witnessing positive returns on their privacy investments, and more than 40% are witnessing benefits at least twice that of their privacy expenditure.

Skilled cybersecurity professionals who could collaborate with developers are necessary to ensure the effectiveness of security. For new companies, encrypting all data with a cryptographic hash should be done. The digital signature of each file would be verified by the system to ensure data integrity. If an intruder gains unauthorized file access, the file's digital signature would be altered, and the system notifies the concerned parties of any malicious activity. There should also be an authentication mechanism to restrict data access. Businesses could implement a multi-factor authentication of all network users. Block-chain-based cybersecurity solutions, such as a digital identification system, could simplify the authentication process. Another thing to take into consideration is to adopt an authentication mechanism that's AI-powered. It will change access privileges based on the network and location of an employee.

5.2.4 CHALLENGES

5.2.4.1 Poor enterprise system integrators

Every organization should have multiple systems for workflow automation to run in synchronization. To share critical data, various systems should be interconnected. In the same way, mobile devices, such as smartphones and laptops, should integrate with complex business systems in a seamless way. Failure to integrate mobile devices with complex systems could lead to information silos, which are made when critical information is only available on one device and not shared with the network of the company. An employee who works from home from time to time, for example, and fails to share important files after moving to another company would generate an information silo. Thus, advanced apps are needed, which could interact with several complex business systems to simplify the processing of data and workflows across.

5.2.4.2 Data security and privacy concerns

 CHALLENGES	<p>According to State of Cloud Security survey conducted by Fugue in April 2020, ~28% of the respondents stated that they have already suffered a critical cloud data breach that they are aware of during the COVID-19 crisis. The survey also highlighted that ~92% of respondents are worried that their organization is vulnerable to a major cloud misconfiguration-related data breach (47.3% highly concerned and 44.3% somewhat concerned).</p>
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Security threats are projected to grow even further in the future. In the past four years, the financial impact of cybercrimes increased by nearly 78%, and the time it takes to resolve cyberattacks has increasingly doubled. The increase in data from various sources is becoming cumbersome for several IT teams. The inefficiency of managing exabytes and petabytes of data has led to an increase in the chances of security breaches and data loss. It may seem as if EMM is a threat to data privacy. However, the actual threat is poorly managed data. EMM comes with three privacy risks, which include data breaches, data brokerage, and data discrimination. Data breaches occur when information is retrieved without consent. In most cases, data breaches are the result of out-of-date software, weak passwords, and targeted malware attacks. These incidents can lead to a damaged reputation and financial loss for an organization. Data breaches can be prevented by keeping software up-to-date, changing passwords often, and educating employees on best security practices. Data brokerage refers to the sale of unprotected and incorrect data. Some companies gather and sell customer data, which contains false information that leads to faulty algorithms. Before buying data, organizations should do their research and ensure they are receiving data from a reputable provider that offers accurate data. As data consists of customer demographic information, organizations may develop algorithms that penalize individuals based on their age, gender, or ethnicity. Organizations should always have a detailed and precise representation of customers, account for biases, and offer fairness above analytics.

According to RSA Data Privacy and Security Survey 2019, in 2018, countless high-profile data breaches that compromised billions of accounts were recorded. In these incidents, businesses suffered financial damages in the form of breach-related expenses and regulatory fines, and they also suffered a potentially severe loss of customer trust. Consumers realized that their data had been exposed and been used in ways they had not considered and approved. This loss of trust represents one of the major unseen risks of digital transformation. Data-sensitive verticals, such as BFSI, government, healthcare, and life sciences, are reluctant to move their data to the cloud, which further impacts the growth potential of EMM solutions.

Similarly, the data post-analysis may not remain anonymous and can be a security threat for organizations. Hence, privacy and security concerns act as a key challenge to the adoption of EMM solutions. As organizations store different types of data in larger amounts over longer periods, they are projected to witness increased pressure to be transparent in terms of the data they collect, its analysis and use, and the need to keep it.

5.2.5 CUMULATIVE GROWTH ANALYSIS

The cumulative growth analysis is carried out considering the short-term and long-term impact of the current scenarios and dynamics, such as drivers, opportunities, restraints, and challenges, on the EMM market. This analysis involves inputs from industry experts and multiple companies associated with the cloud ecosystem.

MARKET DYNAMICS	SHORT-TERM IMPACT (2020-2021)	LONG-TERM IMPACT (2020-2026)
Drivers and Opportunities	(+) 28.5 - 29.5%	(+) 29.5-30.5%
Restraints and Challenges	(-) 4.5-5%	(-) 4.5-5.3%
Projected Cumulative Growth	(+) 24.0-24.5%	(+) 25.0-25.20%

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

5.3 ENTERPRISE MOBILITY MANAGEMENT MARKET: ECOSYSTEM

FIGURE 29 ENTERPRISE MOBILITY MANAGEMENT MARKET: ECOSYSTEM

NETWORK SECURITY SOFTWARE	ENTERPRISE MOBILITY MANAGEMENT	THREAT INTELLIGENCE																												
<ul style="list-style-type: none"> ▪ CISCO ▪ SOLARWINDS ▪ IBM ▪ TREND MICRO ▪ SYMANTEC ▪ FIREEYE ▪ AVAST ▪ WATCHGUARD ▪ FIREMON ▪ GFI SOFTWARE ▪ BITDEFENDER ▪ WEBROOT ▪ AT&T ▪ QUALYS ▪ JUNIPER NETWORKS 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">ENTERPRISE MOBILITY MANAGEMENT</th></tr> </thead> <tbody> <tr> <td style="width: 33%;">▪ MICROSOFT</td><td style="width: 33%;">▪ MOBILEIRON</td><td style="width: 33%;">▪ SAP</td></tr> <tr> <td>▪ CISCO</td><td>▪ IVANTI</td><td></td></tr> <tr> <td>▪ VMWARE</td><td>▪ MATRIX42</td><td></td></tr> <tr> <td>▪ IBM</td><td>▪ SNOW SOFTWARE</td><td></td></tr> <tr> <td>▪ BLACKBERRY</td><td>▪ SOPHOS</td><td></td></tr> <tr> <td>▪ CITRIX</td><td>▪ SOTI</td><td></td></tr> </tbody> </table>	ENTERPRISE MOBILITY MANAGEMENT			▪ MICROSOFT	▪ MOBILEIRON	▪ SAP	▪ CISCO	▪ IVANTI		▪ VMWARE	▪ MATRIX42		▪ IBM	▪ SNOW SOFTWARE		▪ BLACKBERRY	▪ SOPHOS		▪ CITRIX	▪ SOTI		<ul style="list-style-type: none"> ▪ SYMANTEC ▪ IBM ▪ FIREEYE ▪ CHECK POINT ▪ TREND MICRO ▪ ALIENVULT ▪ WEBROOT ▪ DIGITAL SHADOWS ▪ OPTIV ▪ THREATCONNECT ▪ CROWDSTRIKE ▪ McAfee ▪ LOGRHYTHM ▪ LOOKINGGLASS ▪ FARISIGHT SECURITY 							
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APPLICATION SECURITY TESTING	ENTERPRISE CONTENT MANAGEMENT	UNIFIED ENDPOINT MANAGEMENT	APPLICATION MANAGEMENT SERVICES																											
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▪ XEROX	▪ M-FILES																													
▪ ATLASSIAN	▪ HYLAND																													

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

5.4 CASE STUDY ANALYSIS

This section comprises use cases across different companies deploying EMM solution offerings by various vendors. These case studies include various EMM solutions provided by different vendors and their applications.

5.4.1 ASSIST CARE GROUP CUTS TIME SPENT IN TECH SUPPORT BY OVER 90% WITH SOTI MOBICONTROL

Description	Assist Care Group is a leading supplier of care services in West Sussex and Surrey. The company provides tailored support to improve the lives of those in its care as well as their families. It wanted to move away from manual processes in its operations. Its paper-based records were often out of date, and critical information could not be communicated to the staff on time when it mattered the most
Challenge	In late 2016, Assist Care Group established its mobile infrastructure to support staff communication. The company implemented BYOD practice in the organization, which made it worry about device leaks and security issues. Thus, the company needed a unified solution to manage mobile devices.
Solution Offered	SOTI MobiControl offered the company a comprehensive, all-in-one list of features, such as SOTI's unique Kiosk Mode functionality and remote control. This helped the organization to manage its entire mobile fleet. Features such as location tracking allowed the team to locate staff who are nearest to an emergency, while Kiosk Mode ensured security by locking down devices to only the apps that are necessary for staff to perform their jobs.
Benefits Gained	SOTI MobiControl helped the company to reduce the technical support costs by over 90%. The organization was able to improve the efficiency as it was no longer needed to re-allocate care to patients, thus saving EUR 15,000 per year. It also provided complete visibility into mobile operations.

Source: Company Website and Press Releases

5.4.2 ESCOS AUTOMATION ACHIEVES 50% IMPROVEMENTS IN EFFICIENCY WITH 42GEARS' SUREMDM

Description	escos automation GmbH is a system integrator for geriatric care providers. The company offers technology to senior home operators that promote safety, comfort, and social interaction.
Challenge	The company offers technology for senior home operators through a combination of a tablet, home sensors, and remote computing technology, together known as escos Copilot. The tablet that escos Copilot uses can be considered as essential caregiving tools, allowing seniors to experience a higher quality-of-life. These tablets are operational 24*7. The company needed an endpoint management solution to manage the tablets, turning them into dedicated-purpose devices, and remotely update the software. Major challenges faced by escos included: <ul style="list-style-type: none">▪ Remotely troubleshooting devices▪ Remotely managing applications to keep them up-to-date▪ Converting the tablets into dedicated-purpose devices, streamlining use by seniors
Solution Offered	SureMDM by 42Gear has helped escos automation GmbH by configuring tablets with necessary applications and update them remotely. With the SureMDM solution, it was easy for the company to lock down tablets for creating a streamlined experience with a small number of applications necessary for the elderly.

Benefits Gained	With SureMDM by 42Gear, the company witnessed a 50% increase in both efficiency and productivity. It further helped the company to consistently enforce and manage policies on tablets, thus improving support and device lifecycle management.
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Source: Company Website and Press Releases

5.4.3 CADENCE ACCELERATED BUSINESS PRODUCTIVITY WITH THE HELP OF MICROSOFT365

Description	Cadence is a leading electronic design automation company. It wanted to provide new productivity benefits for employees along with data security.
Challenge	The company needed a mobile environment where employees can securely access, edit, and share Office 365 apps, line-of-business apps, and corporate Human Resources (HR) documents from their mobile devices.
Solution Offered	Cadence switched to Microsoft 365 to accelerate its business productivity through mobile access to corporate data in Microsoft Office 365 and other cloud-based line-of-business apps. With Microsoft Intune, the company can highly secure virtual teamwork. It has also migrated all its employee data from Box to OneDrive.
Benefits Gained	The combination of Intune and OneDrive helped the company to deliver new productivity benefits for employees without compromising data security. Intune and OneDrive helped employees to edit data retrieved on their personal mobile devices. Intune was used by the company to separate employees' personal data from corporate data. The company's 4,000 mobile devices are registered and managed by Intune.

Source: Company Website and Press Releases

5.4.4 CITI ORIENT SECURITIES IMPROVED EFFICIENCY AND SECURITY WITH BLACKBERRY UEM AND AWINGU

Description	Citi Orient Securities is a joint venture securities company. Through an integrated local and global experience, it provides a full range of financial services.
Challenge	As Citi Orient Securities continued to expand rapidly, it needed a way to manage and secure mobile infrastructure. The company needed a platform that was capable of providing stringent security for mobile endpoints.
Solution Offered	BlackBerry UEM helped Citi Orient to obtain a single view of its entire mobile infrastructure, along with the capacity to apply policy control across devices and apps. Also, to secure its mobile email, the bank opted for BlackBerry Work, a powerful application that combines email, contacts, calendar, presence, document access, document editing, and much more. The bank also worked with BlackBerry ISV partner, Awingu, to securely access its legacy applications and files on mobile devices.
Benefits Gained	Blackberry UEM and Awingu helped the bank to speed up its business processes and increase efficiency, thereby improving overall competitiveness. Employees can send and receive emails, access in-house application systems, communicate with clients, and access trading systems from their mobile devices. Blackberry also helped the company in making its system compatible with new mobile applications, by integrating them through BlackBerry Dynamics, a secure application container.

Source: Company Website and Press Releases

5.4.5 WORKING WITH IBM AND ATEA, ISS DEPLOYED AN ENTERPRISE MOBILITY MANAGEMENT PLATFORM TO SAFEGUARD ITSELF

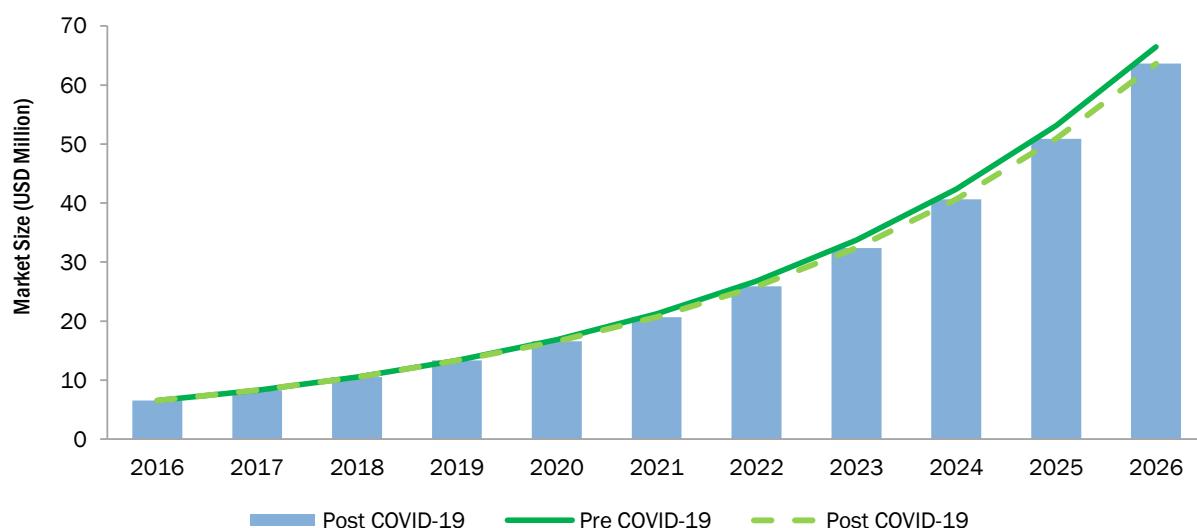
Description	ISS is a global provider of facility services, including catering, property, security, cleaning, and support services. ISS services more than 200,000 customers worldwide. With a growing portfolio of enterprise mobile apps to manage, ISS needed to simplify the deployment, management, and protection of its apps and mobile devices.
Challenge	ISS Workforce is highly global and mobile. The company launched its mobile apps for employees to quickly access assignment details, input work status, and submit the time and billing information. The company's internal team managed app deployment and updates manually, which was time-consuming and not easily scalable to support a growing portfolio of mobile apps. It needed to simplify the deployment, management, and protection of its apps and mobile devices.
Solution Offered	To solve the challenges faced by its employees, the company started working with IBM and Atea, wherein it replaced its manual processes with an enterprise mobility management platform from IBM. The solution simplified the management of the company's mobile devices and apps and helped staff better safeguard mobile devices.
Benefits Gained	IBM MaaS360 helped the company's internal staff to easily provision and update apps to both Android and iOS devices, along with the implementation of security policies based on employee roles.

Source: Company Website and Press Releases

5.5 ENTERPRISE MOBILITY MANAGEMENT MARKET: COVID-19 IMPACT

The COVID-19 pandemic has impacted trading activities across regions. It has led to a minimal impact on the EMM market. Verticals such as manufacturing, retail, transportation and logistics, and energy and utilities have witnessed a moderate slowdown, whereas the impact on the BFSI, government, and healthcare and life sciences verticals is minimal. The impact of COVID-19 is believed to be short-term; however, it may have a significant effect on businesses; forecast to a significant extent for a minimum of 8 to 12 months. With the introduction of new practices, such as work from home and social distancing, virtual private network connectivity has led to the requirement and adoption of cloud-based EMM solutions for security and data privacy to keep workers on track at home. In response to the global COVID-19 pandemic, businesses adopt a series of new, innovative digital technologies. EMM solutions are emerging as a new differentiation point to help them stand out among their competitors.

An increase in the number of new solutions is enabling businesses to enhance communication between organizational stakeholders. When organizations need to quickly collaborate with teams, there is an increased need for document sharing systems. Advanced file sharing analysis and EMM solutions can ensure that everybody can work together on the same version of documents in real-time, with improved security and privacy to make faster business decisions. This has become fundamental to help foster teamwork, improve organization, and increase workplace productivity during COVID-19.

FIGURE 30 EMM MARKET TO WITNESS A SLOWDOWN IN 2020

Source: Secondary Research and MarketsandMarkets Analysis

One of the most interesting developments due to the current COVID-19 crisis is that companies are utilizing the gathered data for improving efficiency and productivity. Therefore, they have started relying on EMM tools to understand how data and devices can be used effectively in terms of supply chain issues, crisis management solutions, cost optimization, and operation optimization. Also, these tools help in leveraging effectively to model and generate different recovery scenarios.

Enterprise data management platforms with analytical tools that enable powerful EMM and deliver real-time actionable insights are immensely helpful in responding to various crises, including COVID-19. For instance, Cognizant leveraged data analytics to generate extensive business and operational insights for improved and faster decision-making, thus responding to the crisis with agility, resilience, and an innovative way. The faster turnaround has enabled the company to seamlessly handle large volumes of data from multiple sources for superior EMM, preparation, and reconciliation. With powerful data and insights, the leadership and operations teams of various companies could make quicker decisions and obtain swifter responses. In March 2020, Starburst, a data access and analytics company, announced free software to accelerate EMM and analytics and stop the spread of COVID-19.

5.6 PATENT ANALYSIS

5.6.1 METHODOLOGY

The patent analysis offers crucial insights into patent filing, business interests, and patenting activities year- and country-wise. It is a technique used to understand the information contained in patents. This study defines patents claiming inventions linked to the EMM market. For this study, a well-planned strategy is devised. Patents are categorized and analyzed using keywords, such as enterprise mobility management and mobile data management. These keywords are used for titles or abstracts to understand patent filing profiles. This section aims at providing an overview of patenting activities. The sources used for this analysis include Patentscope-Wipo, Espacenet, USPTO Patent Database, The Lens—Patent, and Scholarly Search.

5.6.2 DOCUMENT TYPE

This section presents an analysis of the EMM patents registered in the last ten years, from 2010 to 2020. During this period, approximately 197,913 patenting activities were witnessed.

TABLE 6 PATENTS FILED

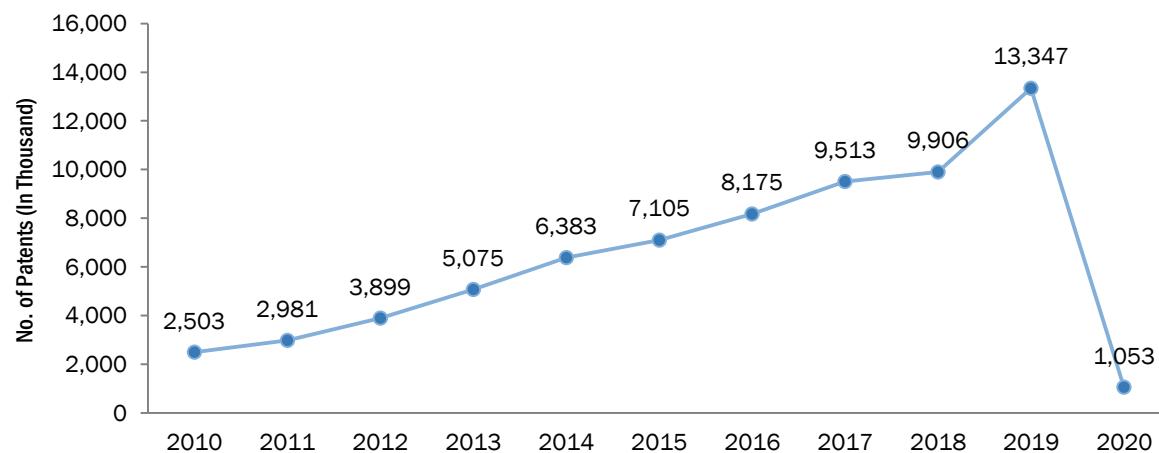
DOCUMENT TYPE	NO. OF PATENTS
Granted Patents	83,833
Patent Applications	114,080
Total	197,913

Source: *The Lens— Patent, and Scholarly Search*

5.6.3 INNOVATION AND PATENT APPLICATIONS

Analysis has been performed for the patents filed and granted in the past 10 years specific to enterprise mobility management and related keywords. An increasing trend has been observed in the number of patent grants in the past 10 years, with a total of 1,053 patents been granted in 2020.

FIGURE 31 TOTAL NUMBER OF PATENTS GRANTED IN A YEAR, 2010-2020

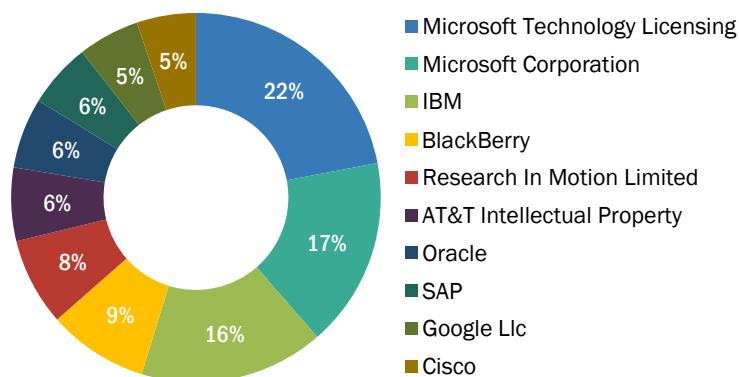


Source: *Lens— Patent and Scholarly Search*

5.6.3.1 Top Applicants

The top applicant's analysis helps in knowing which organization possesses most patents relative to the EMM developments. This will help the collaborators to identify the inventors and vice versa for the joint development of products.

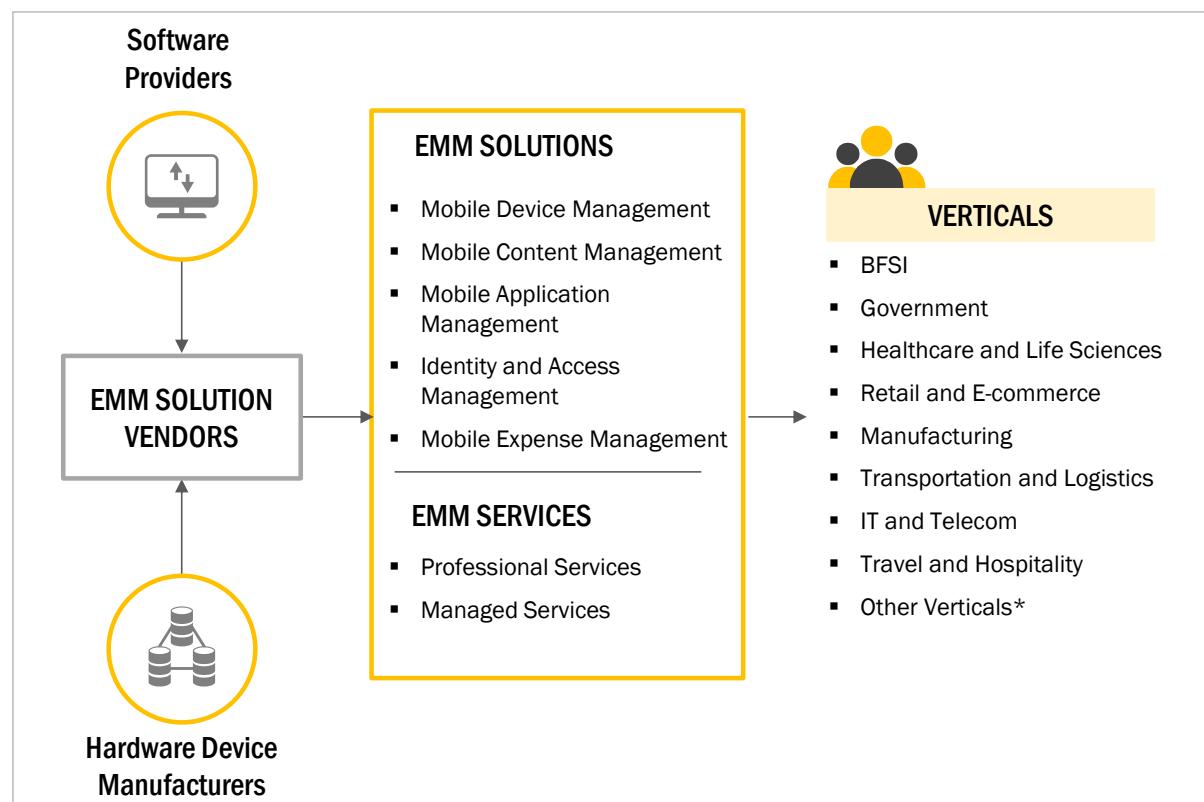
FIGURE 32 TOP 10 COMPANIES WITH THE HIGHEST NUMBER OF PATENT APPLICATIONS, 2010-2020



Source: Patentscope-Wipo, and the Lens— Patent and Scholarly Search

5.7 VALUE CHAIN ANALYSIS

FIGURE 33 ENTERPRISE MOBILITY MANAGEMENT MARKET: VALUE CHAIN ANALYSIS



*Other verticals include education, energy and utilities, media and entertainment, and food and beverages.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The figure above depicts the value chain analysis of the EMM market. The market's value chain comprises software providers, hardware device manufacturers, solutions vendors, service providers, and verticals (end users). The value chain and ecosystem of this market highlight the different software providers, hardware and device manufacturers, and solution vendors that integrate their offerings with each other to deliver EMM solutions and services to end-user mobile devices for protecting corporate data. The EMM software minimizes the burden of IT departments to remotely monitor and manage the entire mobile-network environment from a single, centralized point with optimized resources.

EMM solution providers deploy the developed software into hardware devices that are provided by software and hardware providers, respectively. Fully-integrated EMM solutions comprise device management, application management, security management, and other EMM solutions. EMM solution vendors, such as Microsoft, SAP, MobileIron, Citrix, IBM, BlackBerry, and VMware, also provide EMM services, such as the implementation of solutions, training and support for the implemented solutions, and managed services to help organizations choose and deploy the best EMM solution as per their needs. Once the EMM solutions are completely ready, they are delivered to the end users and they belong to various verticals, such as healthcare and life sciences, education, BFSI, retail and e-commerce, and manufacturing.

5.8 TECHNOLOGY ANALYSIS

Many companies are focusing on extracting more values from their data so that they can improve product quality and make better business decisions. IT architecture is a critical component of this endeavor. However, companies have been reluctant to invest in it without seeing a clear ROI. Mobility has become paramount with the pre-eminence of smart devices at the workplace. Data management, security, collaboration, customer experience, productivity, or more, enterprise mobility has covered it all. Organizations are prioritizing mobility digital transformations happening across the business landscape.

5.8.1 BYOD AND EMM

Organizations worldwide are adopting the BYOD model to improve adaptability, curb expenses, increase productivity, and boost employee satisfaction. To effectively embrace and execute the BYOD model, it is imperative to ensure that the employees' devices are configured adequately with security protocols and stick to data protection norms and BYOD policy.

5.8.2 ARTIFICIAL INTELLIGENCE AND EMM

Enterprises are exploring ways to use AI to maximize its advantages, considering how AI-powered chatbots, virtual assistants, natural language processing, and machine learning have stunned everyone, no wonder it has become the top-most investment priority of CIOs. It can revolutionize mobility with matured smartphones, anomaly detection, sentiment analysis, automated reasoning, data mining, robotics, and predictive analytics. AI-focused devices in enterprise mobility can create experiences that boost workflow viability to make businesses smarter.

5.8.3 BEACON TECHNOLOGY AND EMM

Beacon application development can boost enterprise mobility in healthcare, travel, logistics, retail, education, field force management, and more. It can create customized applications that are to be installed on employees' devices. Beacons improve productivity, compliance, security, and can be utilized to track the mobile device location. Mobile device management and enterprise mobility are getting affected by Beacon positively.

5.8.4 INTERNET OF THINGS AND EMM

IoT devices have been making everyone's lives easier, smarter, and better by transforming business models. Industries such as healthcare, retail, and manufacturing are heavily using IoT to improve business operations and performance. IoT is enabled by enterprise mobility, and if the duo works in tandem, it can positively impact the organizational growth with increased employee productivity, more revenues, and cost-efficiency. It enables users to communicate better through wearable, mobile, and connected devices.

5.8.5 5G AND EMM

The waves of 5G will bring a revolution to amplify remote work productivity, reduce latency issues, increase IoT devices' performance, and make mobile applications run faster. With better connectivity and high speed, 5G is expected to be 10x faster than 4G, making it an ideal choice to improve communication, make the network reliable, and enhance the customer experience. All in all, 5G will streamline mobility, improve productivity, and increase profitability.

5.9 AVERAGE SELLING PRICE TREND

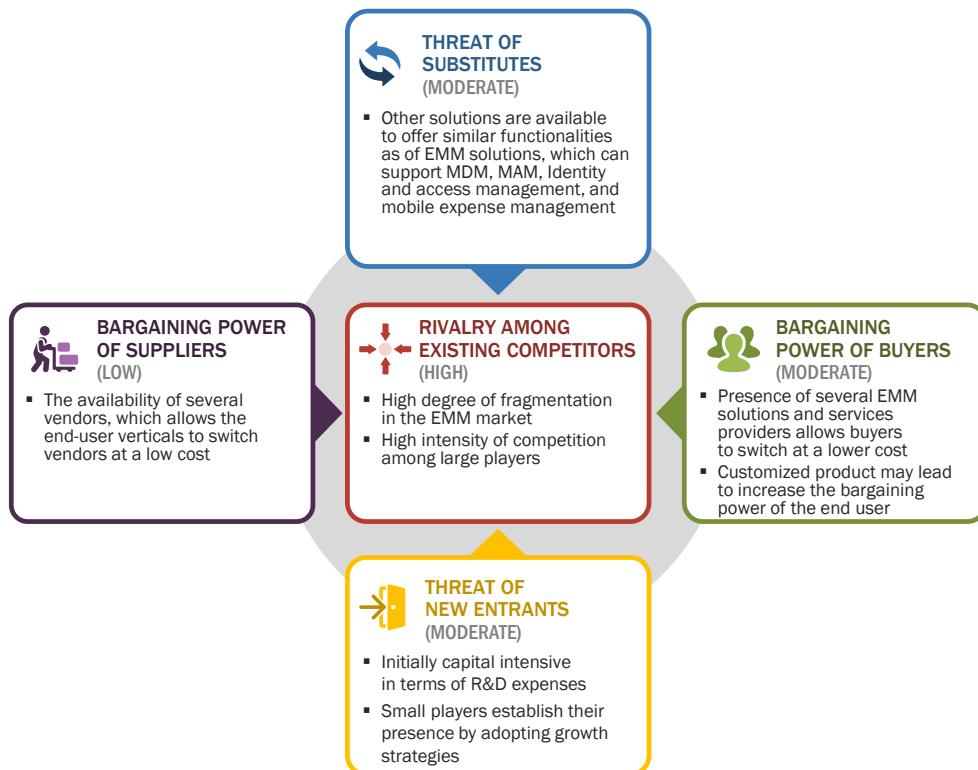
COMPANY NAME	PRODUCT NAME	SELLING MODEL	PRICE (STARTING AT)
IBM	IBM MaaS360 with Watson	Subscription-based model	<ul style="list-style-type: none"> ▪ Essentials – USD 4.00 per client device per month ▪ Deluxe – USD 5.00 per client device per month ▪ Premier – USD 6.25 per client device per month ▪ Enterprise - USD 9.00 per client device per month
VMware	Workspace ONE	Monthly Subscription	<ul style="list-style-type: none"> ▪ Standard – USD 3.78 per device or USD 6.52 per user ▪ Advanced – USD 6 per device USD 10.90 per user ▪ Enterprise - USD 10 per device or USD 15 per user ▪ Enterprise for VDI – USD 20 per device or USD 25 per user
Microsoft	Microsoft Intune	Monthly Subscription	<ul style="list-style-type: none"> ▪ Enterprise Mobility + Security E3 – USD 8.80 user/month ▪ Enterprise Mobility + Security E5 - USD 14.80 user/month
Citrix	Citrix Endpoint Management	Monthly Subscription	<ul style="list-style-type: none"> ▪ Stand-alone - USD 4 user/monthly or USD 3 device/monthly ▪ 1 Year – USD 4.83 per user/month ▪ 3 Years - USD 3.87 per user/month ▪ Workspace Premium - USD 18 per user/monthly ▪ Workspace Premium Plus - USD 25 per user/monthly
42 Gears	Sure MDM	Monthly Subscription	<ul style="list-style-type: none"> ▪ Standard – USD 3.99 Per Month Per Device ▪ Premium – USD 5.49 Per Month Per Device ▪ Enterprise - USD 7.99 Per Month Per Device
ManageEngine	ManageEngine Mobile Device Manager Plus	Annual Subscription	<ul style="list-style-type: none"> ▪ Standard edition - USD 495/50 Devices ▪ Professional edition - USD 895/50 Devices

Hexnode	G Suite EMM	Monthly Subscription	<ul style="list-style-type: none"> ▪ Express - The Basic MDM Suite + Basic Kiosk – USD 1 per device/month ▪ Pro-Advanced MDM + Complete Kiosk - USD 1.8 per device/month ▪ Enterprise Basic UEM - USD 2.8 per device/month ▪ Ultimate Advanced UEM - USD 3.8 per device/month ▪ Ultra-Complete UEM – USD 5.8 per device/month
Jamf	Jamf Pro	Monthly Subscription	<ul style="list-style-type: none"> ▪ USD3.33 per/month per iOS or tvOS device ▪ USD7.17 per/month per Mac*
Miradore	Miradore MDM	Monthly Subscription	<ul style="list-style-type: none"> ▪ Business USD1.5 USD per device/month ▪ Enterprise- USD2 ▪ USD per device/month
ProMobi Technologies	Scalefusion	Monthly Subscription	<ul style="list-style-type: none"> ▪ Starter USD2.0per device/month ▪ Business USD3.0per device/month ▪ Enterprise USD4.0per device/month

5.10 PORTER'S FIVE FORCE ANALYSIS

Porter's five forces analysis is a framework that determines the competitive intensity of a market. This section analyzes the EMM market from five different perspectives: competitive rivalry within the industry, the threat of new entrants, bargaining power of suppliers, bargaining power of buyers, and the threat of substitutes.

FIGURE 34 PORTER'S FIVE FORCES ANALYSIS



Source: MarketsandMarkets Analysis

5.10.1 THREAT OF NEW ENTRANTS

The threat of new entrants refers to the strength of new potential competitors in any market, who can capture the market share of existing companies. Currently, the threat from new entrants in the EMM market is moderate, as there is high R&D expenditure, and the industry is capital-intensive. There are many global and domestic players that have an established base in the market. These market players that have a global presence offer a wide range of EMM solutions for various applications. They have extensive R&D facilities to produce application-specific solutions and maintain strong customer relationships. These established players have several approved and pending patents, which describes their competitive advantage in the market. Proprietary technologies and stringent government regulations are the entry barriers in the market. However, the presence of many EMM solutions and services vendors worldwide makes this a fragmented market.

Various companies enter this market by adopting strategies such as acquisitions and partnerships. Owing to new entrants and high investments in R&D activities to develop low-cost solutions, experts believe that the costs of solutions will decline soon. The growing demand for EMM solutions in emerging applications allows startups to set up their presence in the market. Hence, the threat of new entrants in the EMM market is moderate.

5.10.2 THREAT OF SUBSTITUTES

The threat of substitutes is moderate as UEM alternative solutions are available that can substitute EMM ones. Some of the EMM solutions available in the market include functionalities such as MDM, MAM, MCM, identity access management, and mobile expense management. These advanced functionalities enable efficient EMM and preparation and support enhanced data management and decision making. Thus, the threat of substitutes in the EMM market is moderate. These solutions are used in applications where there is a requirement of data security, high data dependence, accuracy, and real-time data-based decision making, which cannot be achieved from other solutions. Hence, the threat of substitutes in the EMM market is moderate.

5.10.3 BARGAINING POWER OF SUPPLIERS

The bargaining power of suppliers refers to the extent to which the solutions and services suppliers/providers pressurize the end users of EMM solutions and services. EMM suppliers can influence the prices of EMM solutions and services based on a subscription pricing form. Solutions required for EMM include platforms and software tools (APIs and SDKs). Companies providing these solutions are abundant in the market, which allows end users of EMM solutions and services to switch suppliers/providers at a low cost. There are minimal logistics costs involved as most EMM solutions are moving to the cloud. Even in case of on-premises deployment, support can be provided virtually. As a result, the bargaining power of suppliers is low.

5.10.4 BARGAINING POWER OF BUYERS

The bargaining power of buyers refers to the pressure that buyers exert on the EMM solutions and service providers. The presence of several EMM vendors makes it easier for buyers to choose and switch among these vendors. Several unorganized vendors provide EMM solutions and services at a low rate as compared to other major players in the market. This increases the bargaining power of buyers in the EMM market. Different suppliers offer similar products at different prices. Buyers have several options to choose from similar product segments at a different price range. Buyers in the emerging countries are price-sensitive, which increases their bargaining power. However, the buyer loses its power when there is a requirement for a customized EMM solution, i.e., a requirement-based solution to be integrated with existing solutions or cater to a specific business requirement. This makes the EMM solution provider a price setter, which decreases the bargaining power of buyers. Therefore, the bargaining power of buyers in this market is moderate.

Intensity of competitive rivalry: The competitive rivalry within the industry refers to how market players exert pressure on each other. The presence of various well-established players has intensified the level of competitive rivalry in the EMM market. Some of these players are VMware (US), Microsoft (US), IBM (US), Blackberry (Canada), Citrix Systems (US), MobileIron (US), Ivanti (US), 42Gears Mobility Systems (India), Matrix42 (Germany), and ManageEngine (US). These vendors have a strong foothold in the local and global markets owing to their strong product portfolio and well-established strategic alliances. Besides these, there are several vendors in the unorganized sector, which collectively hold a prominent share in the market. Thus, the intensity of competitive rivalry in the market is high.

6 ENTERPRISE MOBILITY MANAGEMENT MARKET, BY COMPONENT

KEY FINDINGS

- The solutions segment is estimated to grow from USD 13,323 million in 2020 to USD 50,386 million by 2026, recording a CAGR of 24.8% during the forecast period. The services segment is projected to grow at a higher CAGR of 26.4% during the forecast period.
- The adoption of EMM solutions is becoming crucial for various verticals, especially for manufacturing, and transportation and logistics companies. There is an increasing demand from companies to provide customers with real-time status of the shipment, and sensitive and critical messages on priority. EMM solutions help companies to quickly integrate data across a variety of systems and channels to create a unified customer view.
- The demand for professional services is projected to rise due to the increase in tailored demand for organizations to identify and remediate sensitive data, reduce the impact of breaches, and comply with regulations. EMM solutions help in the detection, classification, grading, and de-identification to assist organizations to meet compliance requirements specified in GDPR and Personal Information Protection (PIP).
- The demand for managed services is attributed to the rise in the adoption of the work from home strategy by various companies. This strategy has driven the demand for EMM managed services in the market. Businesses are adopting EMM solutions for examining large amounts of data and uncovering hidden patterns, correlations, and other insights.

6.1 INTRODUCTION

Earlier, companies used to face various challenges from increased access to collect and analyze a large volume of customer data for generating real-time insights. To cope with data gathering challenges, businesses are focusing on adopting EMM solutions and services. AI, ML, and IoT technologies are emerging and would provide real-time insights and enable intelligent, data-driven decisions that improve the customer experience. EMM acts as a crucial part for the business as it enables them to collect data from different devices, CRM systems, email marketing tools, marketing automation tools, data warehouses, social media tools, point-of-sale-systems, call center logs, and even IoT devices, and analyze those millions of data points in real-time to produce actionable insights.

EMM is the process of analyzing the customer experience across every touchpoint in the user's journey. Companies use EMM to enable marketing professionals to measure cross-channel journeys over time and improve customer experiences. For companies to communicate effectively with consumers, marketing, analytics, user experience, and IT teams, they require EMM solutions and services to identify critical moments within the customer journey to create a great experience. Businesses are using EMM solutions and services to modernize data management operations, run easy analytics and graphical dashboard creations, and remain scalable through an ideal mix of on-premises and cloud deployments.

Based on component, the EMM market is segmented into solutions and services. The solutions segment includes MDM, MCM, MAM, mobile expense management, and identity and access management. The services segmentation included in this report comprises managed services and professional services. The professional services segment is further bifurcated into consulting, support and maintenance, and deployment and integration.

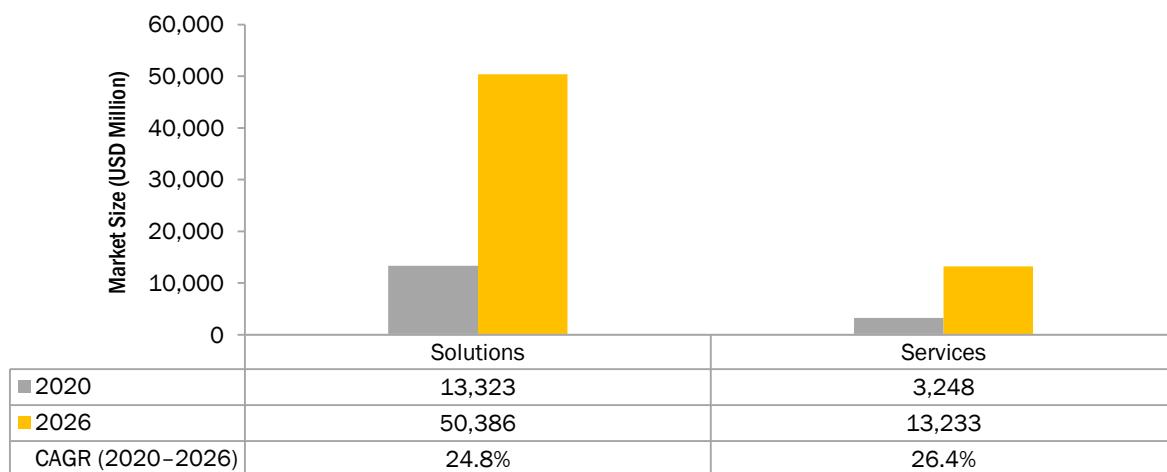
6.1.1 COMPONENTS: EMM MARKET DRIVERS

- According to the World Economic Forum, an estimated 2.5 quintillion bytes of data is produced every day. The pace at which the data is gathered and stored has increased rapidly and shows that 90% of the data in the world today has been created in the past two years. However, most of this data lies dormant, and only 0.5% of it is analyzed. This means that EMM can retain high potential to deliver a wide range of benefits to specific industries.
- Rising need to contain applications to alienate corporate apps and data from personal apps and data on BYOD drives the adoption of MAM solutions.
- The increase in the need to gain a 360-degree view of customer data and provide a personalized customer experience is projected to drive the adoption of EMM solutions.
- Lack of capability in dealing with customer data is expected to increase the adoption of EMM services.
- The demand to configure data usage restrictions for devices or for individual apps for a specified period drives the adoption of mobile expense management solutions.
- According to a new joint research by Sisense and Meidata, nearly half of US data analytics companies say analytics is more important now than before the COVID-19 pandemic. This will drive the adoption of EMM solutions.
- The rise in the demand for managed services is attributed to their ability to enable businesses to access a scalable, global third-party delivery infrastructure on a pay-per-use basis. Due to the outbreak of the COVID-19 pandemic, companies in the retail and e-commerce vertical are approaching EMM MSPs for exploring opportunities in different areas, such as customer experience management, understanding customer touchpoints, reducing customer churn rate, and gaining real-time customer data for making faster business decisions.

6.1.2 COMPONENTS: COVID-19 IMPACT

- While there are several verticals such as manufacturing, and travel and hospitality where all the operations are put on hold, customers have changed the priority of organizations. Organizations now wish to monitor the health and wellness of employees as they are working from home. These use cases have evolved in this COVID-19 pandemic. Verticals such as healthcare, the public sector, and IT and telecommunications are continuing their operations in the pandemic. EMM solution vendors are projected to witness steady EMM solution adoption in these verticals. There is a requirement for innovative solutions, which can be effectively coupled with cloud, security, and network connectivity.
- Several prominent organizations such as AWS and Google Cloud are offering researchers free access to open datasets and analytic tools for helping them in developing COVID-19 solutions faster.
- According to an analysis by Google, there has been an increasing number of phishing emails and websites that are designed to inject malware on computers during the COVID-19 outbreak.
- A team developed an AI tool at UTHealth. This tool has shown the need for stricter and immediate interventions in the Greater Houston area. At Stanford University, researchers have launched a data-driven model that predicts the possible outcomes of various intervention strategies.
- In March 2020, Spirion offered no-cost data privacy tools to help both remote employees and enterprises implement a privacy-first work environment in response to the COVID-19 pandemic.
- Researchers have also predicted that to handle the impact of COVID-19, companies would look for immediate solutions to survive the economic slowdown. During this time, they would mostly be looking for analytical solutions that exhibit features, such as data visualization, simulation and scenario developments, capabilities to analyze data in different business processes, regression analysis, historical trend analysis, forecasting, clustering and segmentation, and standardized reporting. Most solution providers have realized this and started implementing their solutions with these features to help their clients.

FIGURE 35 SERVICES SEGMENT TO REGISTER A HIGHER CAGR DURING THE FORECAST PERIOD



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 7 EMM MARKET SIZE, BY COMPONENT, 2016–2019 (USD MILLION)

Component	2016	2017	2018	2019	CAGR (2016–2019)
Solutions	5,289	6,711	8,491	10,728	26.6%
Services	1,222	1,574	2,018	2,582	28.3%
Total	6,512	8,285	10,509	13,310	26.9%

Note: Numbers are rounded off to the nearest integer, resulting in rounding-off errors.

Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis

TABLE 8 EMM MARKET SIZE, BY COMPONENT, 2020–2026 (USD MILLION)

Component	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Solutions	13,323	16,586	20,689	25,848	32,358	40,410	50,386	24.8%
Services	3,248	4,095	5,172	6,543	8,293	10,484	13,233	26.4%
Total	16,571	20,681	25,861	32,391	40,651	50,895	63,618	25.1%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, resulting in rounding-off errors.

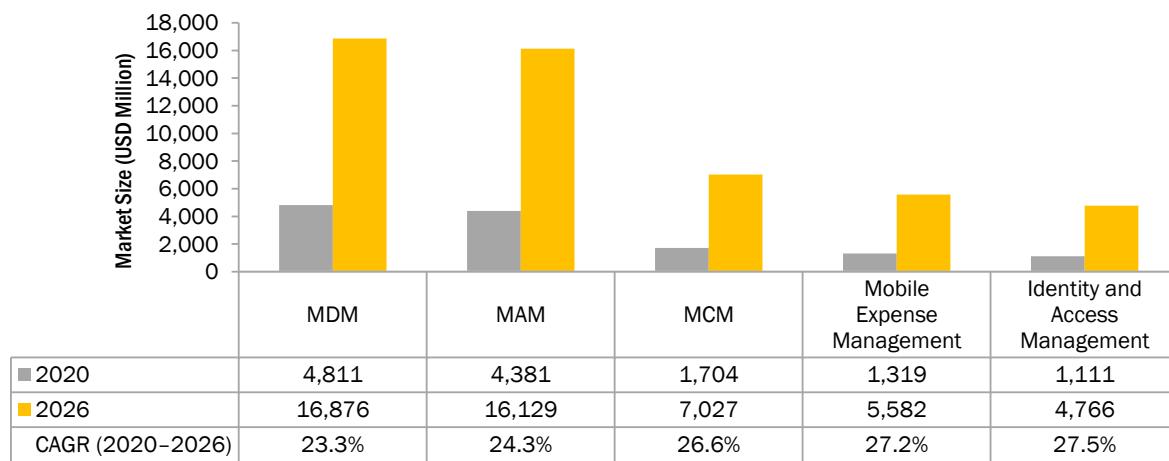
Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

Based on component, the solutions segment is estimated to hold a larger market size in 2020. The growing need of companies to isolate IT applications that can only communicate with each other ensures that personal data remains personal and is kept separate from business data, contributing to the adoption of EMM solutions. An EMM solution helps in enhancing overall data management and gain customer trust. The services segment is projected to record a higher CAGR during the forecast period. This is attributed to the growing digitalization and customer shift toward online purchases, which have made it difficult for companies to cope with the ever-increasing volumes of data from different sources and extract actionable real-time insights during the pandemic.

6.2 SOLUTIONS

In today's marketplace, device management has become more complex with increased digitization. Organizations are relying on EMM solutions to enhance customer acquisitions, retain existing customers, and enhance the customer experience and profitability. Organizations need to manage their data efficiently and effectively to enhance their productivity and maintain business continuity. The proliferation of data amounting to big data has forced vendors to adopt EMM solutions and help IT teams simplify and manage their decision-making process. EMM solutions enable the analysis of vast amounts of social media and sensor-based data to uncover new insights about relationships between customers, products, and operations, and represent them in an easy-to-understand manner. EMM solutions and services are already being accepted and implemented by large enterprises and SMEs. The solutions segment is a key component in EMM implementation to generate a high level of insights and low-cost storage of data. For instance, the Western Airways team implemented Hexnode MDM to ensure security for its devices while allowing for easy, cost-effective device management. This is driving companies to provide opportunities for improvement in device security and management by adopting EMM solutions.

FIGURE 36 IDENTITY AND ACCESS MANAGEMENT SEGMENT TO RECORD THE HIGHEST CAGR DURING THE FORECAST PERIOD



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 9 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2016–2019 (USD MILLION)

Solution	2016	2017	2018	2019	CAGR (2016–2019)
MDM	2,002	2,511	3,140	3,921	25.1%
MAM	1,770	2,236	2,817	3,543	26.0%
MCM	635	819	1,053	1,351	28.6%
Mobile Expense Management	482	625	807	1,041	29.3%
Identity and Access Management	401	521	676	874	29.7%
Total	5,289	6,711	8,491	10,728	26.6%

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 10 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION,
2020–2026 (USD MILLION)

Solution	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
MDM	4,811	5,917	7,290	8,995	11,120	13,711	16,876	23.3%
MAM	4,381	5,430	6,743	8,387	10,452	12,994	16,129	24.3%
MCM	1,704	2,153	2,726	3,455	4,388	5,558	7,027	26.6%
Mobile Expense Management	1,319	1,675	2,129	2,711	3,458	4,398	5,582	27.2%
Identity and Access Management	1,111	1,414	1,802	2,300	2,940	3,747	4,766	27.5%
Total	13,323	16,586	20,689	25,848	32,358	40,410	50,386	24.8%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The MDM segment is projected to account for the largest market size during the forecast period due to the need of companies to provide comprehensive support for devices running on multiple platforms, such as Android, iOS, Windows, tvOS, and macOS from a single console. This growth is also attributed to the rise in concerns of companies to protect a large volume of internal sensitive data from external threats and risks. Companies are also adopting EMM solutions for securing bi-directional communication between devices and ensuring compliance with policies related to access control, logging, and auditing interactions between connected assets. The identity and access management segment is projected to grow at the highest CAGR during the forecast period. This growth is attributed to the need for security teams to eliminate the risk of data breaches and maintain compliance with global regulatory mandates regarding data security, workplace security, and privacy. Moreover, maintaining corporate security standards by enforcing passwords and other authentication policies contributes to the growth of identity and access management.

6.3 MOBILE DEVICE MANAGEMENT

MDM refers to software that enables IT departments to secure and enforce policies on devices, such as tablets or phones, used in business. MDM solutions enable IT departments to remotely enroll an employee or corporate-issued cell phone, tablet, or other device and then track it, manage it, and secure it through a profile specific to that employee and their tasks. MDM is typically enforced by creating profiles for each device on the company's network. Once the profile is created, the IT department can set up features such as email, Wi-Fi access, and specific application access. If a device is lost or an employee is no longer with the company, the IT department can lock the device so that it can no longer be accessed (or even wipe the device clean). In addition to these capabilities, MDM allows enterprises to gain real-time insights into provisioning, device inventory, and Operating System (OS) configuration, as well as troubleshooting tools.

6.4 MOBILE APPLICATION MANAGEMENT

For companies that do not want to deal with the possibility of wiping employees' personal devices, the optimal solution is MAM. MAM helps organizations manage their mobile applications and related software. In addition to covering the deployment and respective updates for an enterprise's mobile apps, MAM helps them apply their security policies to their apps and apply targeted removal of any relevant data from specific devices.

With an MAM solution, the device itself would not get locked down, but the IT department has the ability to lock specific apps and data that contain sensitive information pertaining to the business. The IT department can also push out updates to specific apps, at scale, with MAM. MAM provides the ability to leave personal data such as photos or messages untouched and inaccessible to IT, while still securing vital and confidential business apps and information.

6.5 MOBILE CONTENT MANAGEMENT

With the growing concern over security, every organization needs to comply with regulatory and legal reporting requirements to secure data. Moreover, collaboration is a huge part of the business. Employees work together, even from remote locations, to accomplish a singular goal. Therefore, organizations must implement EMM solutions to manage data and ensure compliance tasks are completed. MCM or Mobile Information Management (MIM) is another key feature of an EMM solution. MCM helps employees collaborate by enabling access to documents, emails, notes, etc., while working from different locations. While working remotely, the MCM system is making sure that all the data being transmitted is secure. Through encryption, MCM makes it safe for remote workers to transmit data across various networks and devices.

6.6 MOBILE EXPENSE MANAGEMENT

Mobile expense management solution is created to assist organizations with controlling costs and monitoring mobile communications expenses. Mobile expense management services offer enterprises insights into their device and storage use and procurement, as well as BYOD-relevant policies. The solution can similarly enforce corporate policies and offer IT administrators a bona fide audit of mobile use.

6.7 IDENTITY AND ACCESS MANAGEMENT

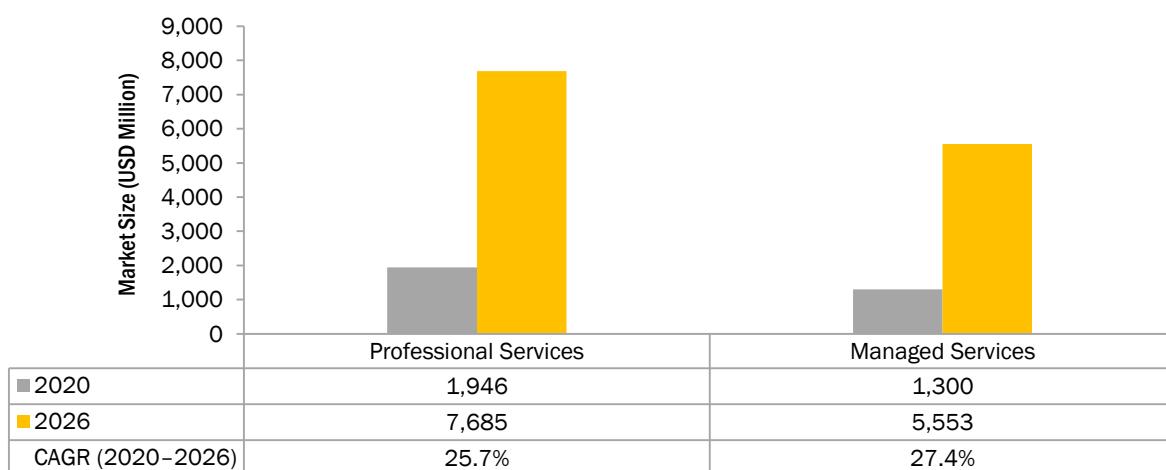
Access management is one of the security components that provide users access to systems, data, and applications inaccessible to unauthorized users. It has become a crucial application for IT security. Due to the large amount of information being stored, used, and transmitted within organizations, it is necessary to define certain restrictions regarding access to sensitive data. Restricting access to information for users who do not require it reduces the risk of data leakages. Restricting access to users who have no need to use certain applications or files helps to ensure the confidentiality of data. It can help project managers gain a clearer picture of actual users. Identity and access management is designed to ensure that only trusted devices and users can access enterprise data or applications. By authenticating the user's identity and then tracking their activity, identity and access management gives IT the tools to manage access across devices and applications beyond the firewall. Identity and access management is the glue that keeps MDM, MAM, and MCM secure. Each of these components serves a specific purpose within the EMM framework, but as they are incorporated into a cohesive system, enterprises are able to gain back control of their digital assets.

6.8 SERVICES

The volume of data that needs to be analyzed is growing day-by-day; this can be attributed to the increasing number of sources that generate data. The adoption of device and content management solutions, including EMM, has become essential in managing data, its sources, and data access. Services form an integral part of the software life cycle and include product upgradation, maintenance, and training and consulting. EMM services help users build, assess, and leverage EMM environments to avoid time wastage and effort on a failed implementation. The services that can be incorporated with EMM solutions are managed services and professional services.

Managed services can be valued based on their use and are provided by third-party vendors. The cost incurred in using managed services depends on the time and amount of usage. Professional services are obtained directly from the parent company without any mediator involved. These services can be provided in the form of support and maintenance, and training and consulting services. As the adoption of EMM solutions increases, the demand for training and consulting services also increases. Support and maintenance services include the assistance provided during the installation of solutions and maintenance activities.

FIGURE 37 MANAGED SERVICES SEGMENT TO GROW AT A HIGHER CAGR DURING THE FORECAST PERIOD



Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis

TABLE 11 SERVICES: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY TYPE, 2016–2019 (USD MILLION)

Type	2016	2017	2018	2019	CAGR (2016–2019)
Professional Services	748	958	1,221	1,555	27.6%
Managed Services	474	614	794	1,025	29.3%
Total	1,222	1,574	2,018	2,582	28.3%

Note: Numbers are rounded off to the nearest integer, resulting in rounding-off errors.

Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis

TABLE 12 SERVICES: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY TYPE, 2020–2026 (USD MILLION)

Type	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Professional Services	1,946	2,441	3,067	3,860	4,867	6,121	7,685	25.7%
Managed Services	1,300	1,652	2,103	2,682	3,426	4,366	5,553	27.4%
Total	3,248	4,095	5,172	6,543	8,293	10,484	13,233	26.4%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, resulting in rounding-off errors.

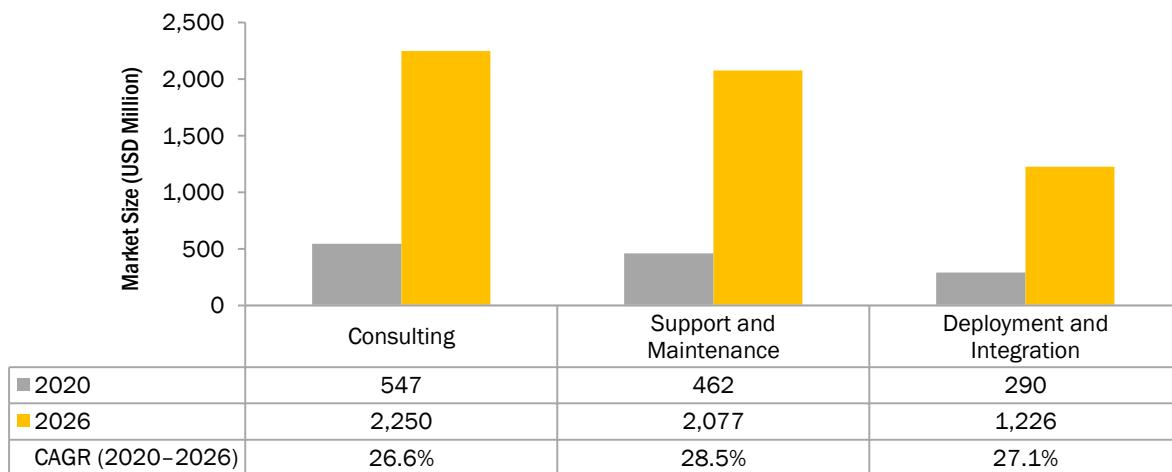
Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis

Based on services, the professional services segment is estimated to account for a larger market size in 2020. The growth of the professional services segment is mainly governed by the increasing complexity of marketing operations and the growing deployment of EMM solutions. The managed services segment is projected to grow at a higher CAGR during the forecast period. This growth is attributed to the provision of technical expertise. These services help companies enhance their focus on core business processes.

6.8.1 PROFESSIONAL SERVICES

Customized, knowledge-based services that are offered to clients fall under the professional services category. Professional services include the entire life cycle of solutions till they are completely deployed. These services include network deployment and customization, maintenance and support services, consulting services, designing, installation, training, network planning, network analysis, and outsourcing services. Every EMM solution vendor has a dedicated support team catering to its customers worldwide. Online support, live chat for real-time answers, other real-time support options, and community portals are established so that clients can meet and exchange ideas with people in other organizations. Companies offering these services encompass consultants, big data experts, and dedicated project management teams that specialize in the designing and delivery of critical decisions, support software, tools, services, and expertise. The growth of professional services is said to be directly proportional to the complexities of the operations being used in the EMM solution. These services help marketing and operations teams focus on enhancing customer experience and raise RoI as they are customized, easily applicable, and assure availability and performance to the maximum extent. The professional services segment is further categorized into three major types: consulting, deployment and integration, and support and maintenance.

FIGURE 38 SUPPORT AND MAINTENANCE SEGMENT TO REGISTER THE HIGHEST CAGR DURING THE FORECAST PERIOD



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 13 PROFESSIONAL SERVICES: EMM MARKET SIZE, BY TYPE, 2016–2019 (USD MILLION)

Type	2016	2017	2018	2019	CAGR (2016–2019)
Consulting	204	263	338	434	28.5%
Support and Maintenance	163	213	278	361	30.5%
Deployment and Integration	107	138	178	229	29.1%
Total	474	614	794	1,025	29.3%

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 14 PROFESSIONAL SERVICES: EMM MARKET SIZE, BY TYPE, 2020–2026 (USD MILLION)

Organization Size	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Consulting	547	691	874	1,108	1,406	1,780	2,250	26.6%
Support and Maintenance	462	593	761	978	1,260	1,619	2,077	28.5%
Deployment and Integration	290	368	468	596	759	966	1,226	27.1%
Total	1,300	1,652	2,103	2,682	3,426	4,366	5,553	27.4%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The consulting segment is estimated to hold the largest market size in 2020. This is attributed to the need for highly technical consultants who can help businesses create the right EMM strategy to move toward the digital transformation initiative and enhance Customer Lifetime Value (CLV). The support and maintenance segment is projected to grow at the highest CAGR during the forecast period. With technology advancements, constant investments in EMM solution maintenance and software development are expected to encourage the adoption of support and maintenance services.

6.8.1.1 Consulting

Consulting services play a vital role in the initial phases of implementing EMM solutions or services, when organizations are looking for customized solutions based on specific business needs and depending on the market trends. These services help in lowering risks, reducing complexity, and increasing the ROI, as they can be easily customized, applied, and can deliver maximum product assurance. Consulting services mainly steer around critical issues and opportunities related to strategy, marketing, operations, technology, mergers and acquisitions, corporate finance, and handheld enterprises, leading to increased effectiveness, boosted performance, reduced costs, and enhanced resilience. The adoption of consulting services in the business sector is said to be driven by the developing need of organizations to adhere to various labor laws and regulations worldwide. With the emergence of technology innovations, enterprises are moving toward digitalization. Consulting services provide expert assistance for strategic planning. Moreover, [x]cube Labs, one of the leading digital innovation and strategy consulting companies, provides CX consulting services that help companies improve customer retention, and brings 5.7x more revenue than competitors by offering a superior customer experience.

6.8.1.2 Support and maintenance

Support and maintenance services involve assistance provided to installed software. They include 24/7 troubleshooting assistance, the upgradation of existing software, problem-solving, repairing, replacing failure components, emergency response management, software maintenance, proactive and reactive monitoring, technical support by technicians, and test scenario management. These services are offered by third-party service providers as well as vendors, who facilitate clients to upgrade and maintain their operating ecosystem post-implementation. These services are fundamentally accommodated for software support, which can be offered from remote spots by means of web conferencing, phones, onsite help, and ticketing frameworks. Support and maintenance services include providing enhancements to solutions and assistance for solving solution-related issues. These services comprise functional support, technical support, and database support that companies render to the customer while installing and maintaining the software. Support and maintenance services help companies understand market trends, changing business conditions, client requirements, or service inconvenience, and help create marketing and corporate branding campaigns.

6.8.1.3 Deployment and integration

EMM solutions need to be integrated with the existing systems. Therefore, these solutions require the right level of connectors and back-end integration capabilities. System integration services are gaining wide acceptance by end users across the globe, as these services ensure that systems efficiently communicate with each other to improve the operations of the entire production process. System integration services begin with collecting customer requirements and then deploying, integrating, testing, and rolling out solutions. With the increasing number of installed data source, both online/offline, an enormous data is being generated globally. A failure or a badly integrated system might result in huge losses for an organization, eventually hampering the entire workflow. Thus, deployment and integration are an integral part of any service that is professionally delivered to manage the deployed solutions.

6.8.2 MANAGED SERVICES

Managed services mainly provide IT support to enhance client experiences. At times, it becomes troublesome for companies to concentrate on their core business procedures and simultaneously handle these services. This leads to a high reliance of companies on third parties for offering managed services. Every technology domain requires well-delivered managed services. Technical expertise, service consistency, and flexibility must be provided by vendors, regardless of the geographic location of clients. Managed services provide all the required skillsets to maintain and upgrade solutions, which are of utmost importance in the EMM environment. Pre- and post-deployment questions and needs of clients are taken care of through the managed services unit. Organizations mostly outsource such services to offer clients on-time delivery and enhanced experiences. EMM solution providers offer a range of managed services to their customers so that they can focus on their core competencies.

7 ENTERPRISE MOBILITY MANAGEMENT MARKET, BY ORGANIZATION SIZE

KEY FINDINGS

- The large enterprises segment is projected to grow from USD 10,601 million in 2020 to USD 38,532 million by 2026, recording a CAGR of 24.0%, while the SMEs segment is projected to record a higher CAGR of 27.0% during the forecast period.
- Large enterprises have already started implementing EMM solutions and are focusing on implementing advanced technologies to detect security beforehand to avoid unexpected cyberattacks.
- The significant amount of data generated across enterprises on a daily basis creates the need to determine where personal and sensitive data is located and what it contains. This is expected to drive the adoption of EMM solutions and services across large enterprises to analyze data and fasten the regulatory reporting for adequate security and risk management.
- The growing market share of SMEs across several verticals, including BFSI, healthcare and life sciences, manufacturing, retail and e-commerce, and telecommunications and IT, and their increasing focus on adopting technologically advanced solutions and services are projected to drive the growth of the EMM market.
- EMM is projected to contribute significantly toward the focus on security, application integration and management, as well as the financial implications of such solutions.

7.1 INTRODUCTION

Based on organization size, the EMM market is segmented into large enterprises and SMEs. Currently, the market share of large enterprises is higher. However, the market for SMEs is projected to record a higher CAGR during the forecast period.

The organization size is identified based on the number of employees working in an organization as per the global standards given below:

- SMEs: Less than 1,000 employees
- Large Enterprises: More than 1,000 employees

Both enterprises are focusing on adopting EMM solutions and services to quickly identify thefts and effectively make well-informed, proactive decisions that reduce risks associated with data. The adoption of emerging technologies, such as IoT, AI, and ML, is enabling users to integrate these technologies and create improved data visibility for generating real-time business insights.

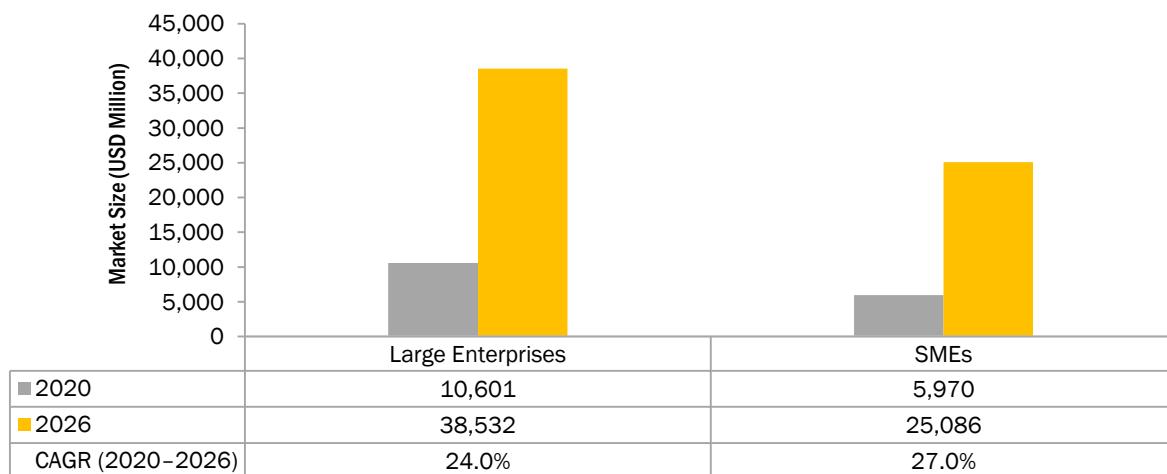
7.1.1 ORGANIZATION SIZE: EMM MARKET DRIVERS

- Lack of resources and stringent marketing budgets would drive the adoption of EMM solutions within SMEs.
- The need for government compliance and regulatory requirements with respect to handling processes and policies across all mobile devices that have part or a major stake within business processes would increase the adoption of EMM among SMEs.
- The availability of financial resources and infrastructure and the need to effectively manage customer data spread across organizations would drive the adoption of EMM solutions in large organizations.
- The huge inflow of data from multiple channels and the need for marketing automation would further drive the adoption of EMM among large enterprises.
- The growing concern of customer data privacy and protection is driving the adoption of EMM solutions among SMEs. According to research conducted in 2018 by Capterra, with nearly 700 SMEs respondents, 71% of US SMEs are using data and information security technology, and small-businesses data security is becoming one of the top priorities for tech spending over the next two years.
- The COVID-19 pandemic accelerated the transformation of trade and brought disruptions that will permanently change the way businesses operate. According to Argentina International Chamber of Commerce, SMEs have started using digital tools to perceive a wide range of benefits: 85% of SMEs that use at least one digital tool have stated that these have enhanced their business performance that help to boost their customer growth and reach new customers, both locally and in foreign markets.

7.1.2 ORGANIZATION SIZE: COVID-19 IMPACT

- Countries are launching financial packages in a bid to restore their economies amidst the COVID-19 pandemic gripping countries across the globe. For instance, the US is looking at a Senate vote to roll out a USD 2 trillion rescue package.
- Italy, one of the most widely impacted countries by the crisis, has developed an emergency plan of USD 28 billion that could help the country inch slowly toward normalcy. As businesses across verticals are finding it a challenge to operate consistently, it has been a distressing time for SMEs.
- The GDP of countries is going to fall due to the COVID-19 pandemic. It would affect SMEs more as compared to large enterprises, as they do not have sufficient capital reserves to bear losses, and there will be no or fewer new businesses for at least three to four months.
- Verticals such as manufacturing would be impacted, and countries are projected to mostly remain dependent on these verticals. The IMF projects the emergence of a global recession, which could be worse than the economic crisis of 2008. According to an industry expert, EMM vendors are projected to focus more on smart discovery post-COVID-19.
- The COVID-19 pandemic has significantly impacted global trade. Multinational companies have witnessed an initial supply shock, after which they started facing the demand shock as many countries introduced lockdown measures. Governments, businesses, and customers have struggled to procure basic products and materials. According to the data released by TradeShift, domestic and international trade transactions witnessed a decline of 56% since the mid of February. The US, the UK, and Europe have also witnessed a combined initial drop of 26% at the beginning of April. As stated in the PricewaterHouse Cooper (PwC) April CFO Pulse survey, 77% of CFOs focused on implementing cost-containment measures.
- Accenture has collaborated with SAP to develop the supply chain scenario planning-as-a-service that uses SAP Integrated Business Planning (IBP) and Accenture's services to stabilize and build a stronger and resilient supply chain. This service would help meet demands and address supply chain challenges.

FIGURE 39 SMALL AND MEDIUM-SIZED ENTERPRISES SEGMENT TO REGISTER A HIGHER CAGR DURING THE FORECAST PERIOD



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 15 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2016–2019 (USD MILLION)

Organization Size	2016	2017	2018	2019	CAGR (2016–2019)
Large Enterprises	4,313	5,441	6,842	8,590	25.8%
SMEs	2,198	2,844	3,667	4,720	29.0%
Total	6,512	8,285	10,509	13,310	26.9%

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 16 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2020–2026 (USD MILLION)

Organization Size	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Large Enterprises	10,601	13,112	16,250	20,170	25,083	31,115	38,532	24.0%
SMEs	5,970	7,568	9,611	12,221	15,568	19,780	25,086	27.0%
Total	16,571	20,681	25,861	32,391	40,651	50,895	63,618	25.1%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The large enterprises segment is estimated to hold a larger market share in 2020. The growth of this segment is due to large enterprises witnessing an increase in the need to manage large volumes of data being generated from business functions and customers to enable data-driven decisions. This need encourages the adoption of EMM solutions and services to meet the customers' expectations and build trust and loyalty for the brand. The SMEs segment is projected to register a higher CAGR during the forecast period due to the growing need to enhance business processes. The EMM policy ensures that the enterprise application is integrated and usable by mobile devices, while providing and ensuring a secure access mechanism. This is one of the major factors encouraging the adoption of EMM solutions and services among SMEs and large enterprises.

7.2 LARGE ENTERPRISES

Organizations with more than 1,000 employees are categorized as large enterprises. Large enterprises have various departments and a decentralized workforce. They often have sensitive data that needs to be protected from external threats. These companies have significant security budgets and deploy more sophisticated EMM solutions. The ubiquitous accessibility to corporate data and applications through mobile devices integrated over corporate networks has extensively leveraged businesses for organizations. Large enterprises are already leveraging the capabilities of EMM solutions to power their business operations and improve employees' productivity, which helps them concentrate more on different business areas and drive higher business revenue. EMM solutions are also helping large enterprises in managing, controlling, and securing many mobile devices at one go. The use of smartphones and tablets to access business applications has become a common practice in large enterprises. Furthermore, large organizations require 24/7 multichannel network services to stabilize their business processes. The growth of the large enterprises segment in the EMM market can be attributed to the increasing adoption of mobile devices among businesses and the importance of mobile applications as an effective medium of connecting organizations, their customers, and their employees.

7.3 SMALL AND MEDIUM-SIZED ENTERPRISES

SMEs are organizations with an employee strength of less than 1,000. Given the unpredictability of managing a small business, user-based, software-as-a-service (SaaS)-delivered management is also essential. This enables a small business to scale up or down on management seats as needed. Seasonal businesses, or SMEs that have fluctuating staff levels, require this the most. SMEs require the ability to both take on mobile worker use cases, new and specialized deployment scenarios for mobile technology, especially as smaller firms become more sophisticated around technology deployments. For instance, Credico chose IBM Security MaaS360, a UEM solution, for its device fleet management. The SaaS-based solution allowed for quick deployment with strong endpoint controls around app and data usage restrictions. As evident from the Credico example, SMEs are deploying mobile technology in diverse ways with new use cases beyond traditional mobile computing, which require high levels of security, manageability, and support. Moreover, cloud services have reduced the complications in using IT for SMEs, as they follow various pricing models, such as the pay-per-use model. Additionally, digital technologies have fueled the EMM market by adopting omni-device management.

8 ENTERPRISE MOBILITY MANAGEMENT MARKET, BY DEPLOYMENT MODE

KEY FINDINGS

- The on-premises segment is projected to grow from USD 6,895 million in 2020 to USD 23,975 million by 2026, recording a CAGR of 23.1%, while the cloud segment is projected to grow at a higher CAGR of 26.5% during the forecast period.
- Highly secure data encryption, complete data visibility, and control features are key factors encouraging the adoption of on-premises-based EMM solutions.
- Large organizations deploy on-premises EMM solutions and services due to privacy and security concerns related to confidential data.
- The growth rate of the cloud segment is attributed to the availability of easy deployment options, scalability, and minimal requirements of capital and time. These factors support the current lockdown scenario of COVID-19 as social distancing and the lack of workforce have adversely affected the growth of various verticals.
- The cloud segment accounts for the fastest market growth as it offers various benefits, including scalability and cost-effectiveness, which are projected to drive the growth of the overall EMM market.

8.1 INTRODUCTION

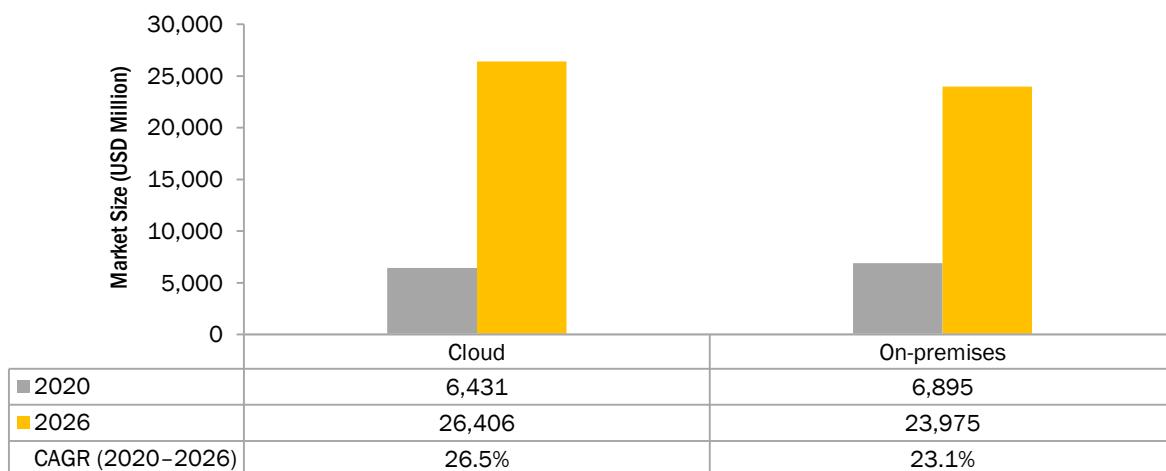
Data is an extremely valuable asset for formulating business strategies. Organizations are increasingly focusing on channelizing and harmonizing critical customer data. They are constantly investing in maintaining their data in a central repository and complying with business policies and government regulations. IoT is generating a high amount of data, putting a tremendous strain on Internet infrastructure. As a result, organizations are working on reducing pressure and developing solutions for managing data insights. Organizations opt for the deployment mode based on their requirements, such as scalability and the level of data security to keep customer data protected. The EMM market, by deployment mode, is segmented into on-premises and cloud. The cloud segment accounts for a higher growth rate due to its easy availability and agility. However, security threats related to data storage in the cloud are projected to create opportunities for the on-premises deployment mode, particularly among large enterprises.

8.1.1 DEPLOYMENT MODE: EMM MARKET DRIVERS

- Low cost, improved agility, and speed of the cloud technology are helping companies in reducing their IT administration costs for maintaining customer data and continuously upgrading organizational infrastructure. The easy integration of data with the existing applications and databases leads to the adoption of on-premises EMM solutions.
- Cloud-based EMM solutions empower IT teams to enroll, lock, protect, and manage devices from remote locations, which would drive the growth of the segment.
- Modern mobile device OS demands regular updates of platforms for their smooth functioning. Cloud-based EMM solutions offer faster response to such updates as compared to on-premises solutions.
- Cloud-based EMM solutions offer a simple User Interface (UI), enhanced device security, minimized costs, better remote control over devices, and improved support, thus driving the growth of the cloud segment.
- On-premises deployment is majorly used by government, defense, and BFSI verticals where the confidentiality of data is high. On-premises deployment provides a higher level of data security compared to cloud deployment.
- Cost-effectiveness, easy access, and scalability would boost the adoption of cloud EMM solutions. The availability of the cloud for free or as per the pay-per-usage models makes its adoption easier for SMEs and businesses with medium or low focus on data security. These organizations have a higher proportion of their workloads, services, and apps running on the cloud environment.
- Enhanced control over data location accessibility across the network of on-premises is expected to drive its adoption in the EMM market.
- The flexibility to customize solutions as per specific requirements and merge into existing IT infrastructure makes on-premises deployment a lucrative option for large enterprises with complex requirements.
- The minimum support and maintenance cost required for cloud deployment is projected to drive the growth of the cloud segment. Cloud deployment enables organizations to collaborate on projects in real-time.

8.1.2 DEPLOYMENT MODE: COVID-19 IMPACT

- The decline in IT spending by core verticals, such as manufacturing and government, and their data-sensitive work environments have resulted in the increased adoption of on-premises EMM solutions.
- The COVID-19 outbreak is encouraging numerous companies to prioritize their IT strategies. Several organizations are emphasizing on the importance of investing in the right cloud-based EMM solutions, enabling employees to work remotely to limit the pandemic impact on productivity.
- The cloud technology market is nearing its maturity stage, and despite the end of support threats, EMM decision-makers are focusing on opting for on-premises solutions to control security. However, with the global lockdown and work from home practice gaining traction as the need of the hour, companies are opting for cloud-based infrastructure to manage and monitor employees and facilities working remotely.
- Companies and governments are focusing on ensuring that platforms being used for remote operations are secure and operate at the required network speed for home use, and at the same time, facilitate co-workers to socialize remotely with each other. Companies offering cloud computing services and remote collaboration services have been at the forefront to minimize disruption. For instance, Google Cloud Platform's (GCP) revenue increased by 52% Y-o-Y in Q1 2020.
- The demand for financial applications such as e-banking and mobile banking is creating more opportunities for cloud-based EMM solution providers, as the current capacity of data centers is not enough. Enterprises are collaborating to develop applications based on complex technologies, such as AI and ML, to solve the COVID-19 problem, thereby driving the demand for more infrastructure to store data and run these applications. Cloud vendors may face challenges in hardware procurement due to manufacturing and supply chain disruptions in various parts of China and its adjoining economies. However, the pandemic impact would be minimal in an optimistic scenario and higher in a pessimistic scenario as workloads would increase substantially.
- Enterprise IT expenditure is projected to decline due to supply-demand disruptions, pending business decisions, and other socio-economic factors. Enterprises would increasingly rely on on-premises and public cloud services to meet their near-term business goals. This trend is projected to continue in 2020 and 2021. Leading Cloud Service Providers (CSPs)/hyperscalers such as Microsoft, Alphabet, Apple, Amazon, and Facebook are projected to increase their CAPEX for data center expansions to support the increase in workload for their internal and external stakeholders. Workforce-dominant verticals are projected to lower their IT expenditure and redirect it to support mission-critical functions.

FIGURE 40 CLOUD SEGMENT TO REGISTER A HIGHER CAGR DURING THE FORECAST PERIOD

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 17 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2016–2019 (USD MILLION)

Deployment Mode	2016	2017	2018	2019	CAGR (2016–2019)
On-premises	2,883	3,613	4,512	5,626	25.0%
Cloud	2,406	3,100	3,981	5,104	28.5%
Total	5,289	6,711	8,491	10,728	26.6%

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 18 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2020–2026 (USD MILLION)

Deployment Mode	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
On-premises	6,895	8,468	10,419	12,838	15,846	19,509	23,975	23.1%
Cloud	6,431	8,120	10,272	13,011	16,511	20,899	26,406	26.5%
Total	13,323	16,586	20,689	25,848	32,358	40,410	50,386	24.8%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The market size of the on-premises segment is estimated to be larger than the cloud segment in 2020. This is attributed to on-premises features, such as enhanced control over data in terms of location and the real-time availability of data for extracting insights. The cloud segment is projected to grow at a higher CAGR during the forecast period. The easy deployment and minimal capital requirement benefit of cloud technology facilitate the adoption of the cloud deployment model. The adoption of cloud technology solutions is expected to be supported by the COVID-19 pandemic, as lockdowns and social distancing practices are encouraging companies to move to cloud solutions managed remotely.

8.2 ON-PREMISES

The on-premises deployment mode of EMM solutions and services is a commonly used practice. It offers enterprises the power to manage risks, business processes, and industry policies, and enables compliance management. Security and compliance are major concerns for businesses to manage the ever-increasing demand for customer engagement. The adoption of on-premises EMM solutions reduces security risks and helps in boosting CX. The secure feature of on-premises has led to the modernization of operations to increase response rates, enhance efficiency, and reduce costs. On-premises deployment is a traditional approach to implement customer analytics solutions across enterprises. It is popular among organizations that majorly focus on enhancing data security. Some of the features offered by the on-premises deployment mode are data capture at the enterprise level, analysis, and reporting solutions, which run on user-owned servers or services from certified partners. Today, most organizations need to deploy on-premises solutions to deliver affordable, safer, sustainable, and reliable services. For instance, in May 2020, AWS introduced the general availability of Amazon Kendra, an enterprise search service, which provides a wide range of native cloud and on-premises connectors to popular data sources. These data sources include SharePoint, OneDrive, Salesforce, ServiceNow, Amazon Simple Storage Service, and relational databases.

8.3 CLOUD

The cloud-based EMM solution deployment mode is a cost-effective and efficient way of managing big data issues across organizations. The pay-per-use pricing model of cloud solutions helps organizations to reduce their infrastructure costs. Cloud-based solutions involve the Software-as-a-Service (SaaS) model, wherein users can access MDM solutions virtually through the Internet. In this deployment type, EMM solutions are delivered via the cloud. The advantages of deploying cloud-based EMM solutions include flexibility, scalability, affordability, operational efficiency, and low costs. However, cloud-deployed EMM solutions have certain shortcomings, such as lack of control over applications, strict government regulations, and private content. The overall adoption of cloud-based EMM solutions is projected to be on the rise and would be high during the forecast period due to the associated functionalities and core features. The additional benefits of cloud-based solutions include effectiveness while being used by many users, reduced upfront costs, easy rolling out of new projects, zero hardware investments, low maintenance costs, and minimized infrastructure costs.

9 ENTERPRISE MOBILITY MANAGEMENT MARKET, BY VERTICAL

KEY FINDINGS

- The BFSI vertical is projected to grow from USD 3,147 million in 2020 to USD 11,101 million by 2026, recording a CAGR of 23.4% during the forecast period.
- The growth of the BFSI vertical is attributed to its dynamic and competitive nature characterized by the changing consumer demands, evolving macroeconomic landscapes, and evolving regulatory frameworks. This vertical is moving toward cloud due to large customer data, which gives rise to security challenges. EMM solutions can enable the vertical to navigate challenges by reducing the scope of IT audits and compliance audits, such as PCI-DSS and GLBA, and ensuring consistent security and compliance across financial organizations' data centers, saving hours of manual efforts, operational headaches, and audit costs.
- During the COVID-19 pandemic, companies in the BFSI vertical have been using EMM and analytics solutions for numerous applications, such as predictive modeling, customer retention and fraud detection, and recommendation engine. Among these applications, predictive modeling is projected to be used massively by companies during the COVID-19 crisis as they need to deal with critical and sensitive data, minimize risks, and account for management costs. It is projected to gain more popularity after the pandemic for trading insights. Organizations and individuals would use it to identify the most profitable deal in buying and selling stocks.
- The manufacturing vertical is projected to record the highest CAGR of 26.9% during the forecast period. With the growth of the Industry 4.0 trend, manufacturers are focusing on connecting thousands of machines across their global factories to IoT platforms, which generate enormous amounts of data. EMM solutions help manufacturers increase their capacity utilization and ultimately win more businesses to remain competitive across the globe in their concerned markets. These solutions offer manufacturers tangible results in terms of a significant rise in operational productivity.
- The transportation and logistics vertical is projected to record the second-highest CAGR of 26.7% during the forecast period. The need of organizations to incorporate technology that helps make tracking more efficient, while also enhancing visibility via GPS tracking capabilities on devices drives the adoption of EMM solutions in the transportation and logistics vertical.

9.1 INTRODUCTION

Enterprises generate significant volumes of data. This data needs to be managed properly to streamline business processes and achieve strategic goals. However, the data is scattered across the organization, exists in different formats, and needs to be managed at a central location. Enterprises are facing a problem in analyzing data in various styles. EMM tools are witnessing increasing adoption across different verticals due to the proliferation of data and the need to meet the growing demand for faster information delivery among data-driven organizations.

Companies use EMM solutions in multiple situations, usually to increase their overall efficiency. Some industries, such as the BFSI, have highly sensitive data that needs to be communicated over the smartphone to facilitate various banking services, while other industries, such as healthcare and life sciences demand agility along with the security to enhance their operations. The government and defense industry also requires stringent security solutions to protect classified data from outside access. The EMM market has been segmented based on verticals into BFSI, retail and e-commerce, healthcare and life sciences, IT and telecom, manufacturing, government, transportation and logistics, travel and hospitality, and others (education, energy and utilities, and media and entertainment).

9.1.1 VERTICALS: EMM MARKET DRIVERS

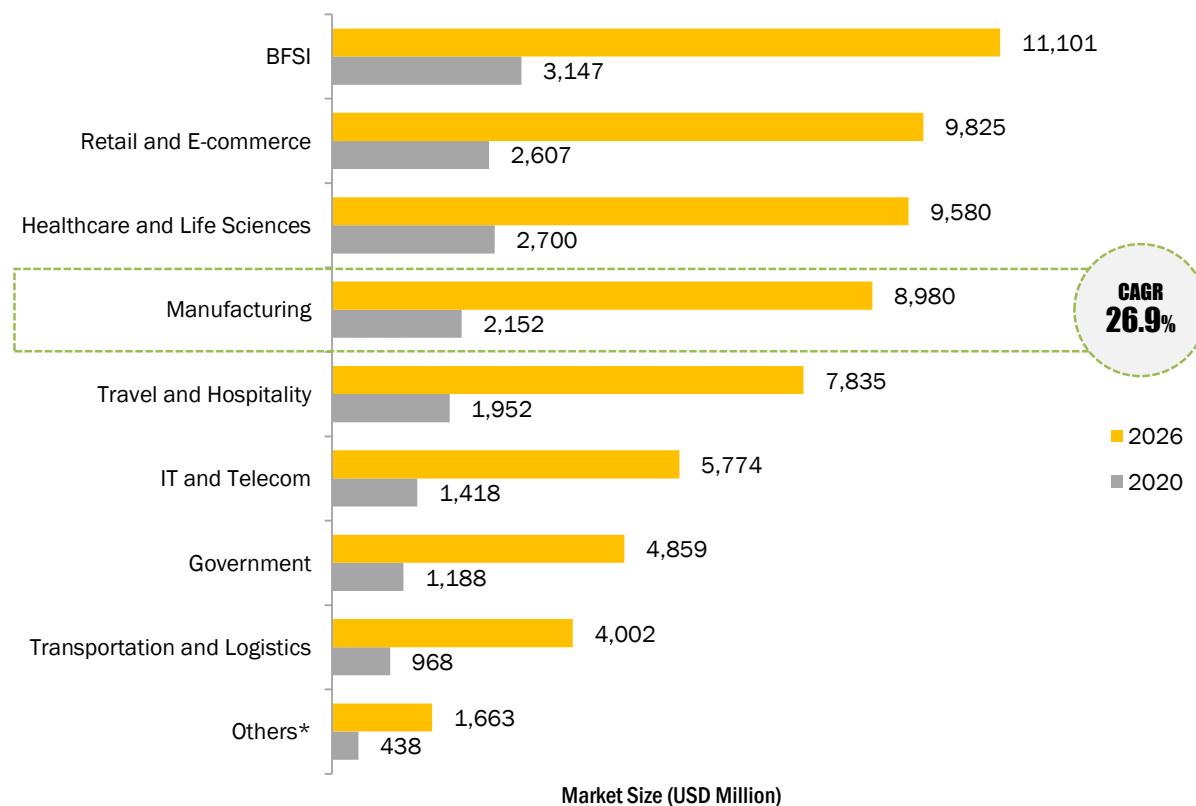
- The need for the management of enormous data related to deposits and withdrawals at Automated Teller Machines (ATMs), purchases at PoS payments done online, and customer profile data collected for KYC is a major concern for companies in the BFSI vertical. The BFSI vertical handles and stores data, such as financial records and credit or debit card information, which is heavily regulated. The increase in focus on customer service is encouraging companies to adopt EMM solutions for enabling customer satisfaction.
- According to NASSCOM's Talent Demand and Supply Report, the banking vertical integrates big data and AI with key value-chain processes, such as knowledge management, identity authentication, market analysis, CRM, risk prevention, and anti-money laundering.
- EMM solutions in the BFSI vertical help detect, report, monitor, and counter cyber threats along with maintaining the privacy of information systems, which is expected to drive market growth.
- Telecom industries offer comprehensive global services that communicate with millions of devices that may be potential targets for attackers. EMM solutions protect mobile devices from potential threats and breaches.
- The increasing number of online activities in the retail industry using mobile devices is contributing to the growth of the retail and e-commerce enterprise vertical, thus providing opportunities for EMM vendors.
- Health and fitness mobile applications store the personal information of users and patients, which is the most potential target for hackers and attackers. EMM solutions further provide better device security and reduce confidential data leakage.
- The increase in complexities in the healthcare and life sciences vertical has fueled the need for remote and real-time insights from unstructured clinical data, thereby driving the adoption of EMM solutions. The need of healthcare providers to handle substantial amounts of patient data on a daily basis and comply with HIPAA, HITECH, and other data security laws and regulations is driving the adoption of EMM solutions.
- The need to optimize travel search, and enable channel attribution and predictive modeling by analyzing every interaction that produces a transaction is driving the adoption of EMM solutions in the travel and hospitality vertical.

- The adoption of EMM solutions in the telecommunications and IT vertical is due to use cases, such as network optimization, customer scoring, fraud prevention, churn prevention, and operational intelligence.
- The IT and telecom vertical maintains sensitive data, such as location, transactional data, and call recordings in real-time, due to which it needs to comply with multiple security regulations that are driving the adoption of EMM solutions and services.

9.1.2 VERTICALS: COVID-19 IMPACT

- In India, a Bengaluru-based company, Digit Insurance, launched a cover against COVID-19 under the Sandbox Regulations of Insurance Regulatory and Development Authority of India (IRDAI). This cover includes a 100% payout in case of positive cases and a 50% payout for those in quarantine in a government or army hospital.
- To address the COVID-19 impact on the BFSI vertical, the adoption of digital technologies such as video banking facilities, AI-supported tools, and conversational platforms has become essential. These technologies help in dealing with increasing call volumes and automating business processes to ensure the availability of digital banking services.
- As most insurers and agents, brokers, and financial advisors are working from home, they would face risk management and logistical challenges as COVID-19 has disrupted their client servicing, encouraging the adoption of EMM solutions.
- Currently, the healthcare vertical across the globe is struggling to deal with the supply-demand imbalance as medical supply chains across the globe are in a weak state due to the shutdown of manufacturing plants. However, as healthcare spending is increasing exponentially, research companies that are producing test kits, developing vaccines, and manufacturing medical equipment would increasingly benefit. Life science companies are also encouraging EMM solutions in the drug discovery process against COVID-19.
- Governments in various countries have launched contact tracing apps to stop the COVID-19 pandemic. The Indian government has launched Aarogya Setu; Australia launched the COVIDSafe app; and Singapore has launched the TraceTogether app. Singapore has also launched a digital contact tracing wearable device named TraceTogether Tokens for people who do not use smartphones.

FIGURE 41 MANUFACTURING VERTICAL TO RECORD THE HIGHEST CAGR DURING THE FORECAST PERIOD



*Others include education, media and entertainment, and energy and utilities.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 19 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2016–2019 (USD MILLION)

Vertical	2016	2017	2018	2019	CAGR (2016–2019)
BFSI	1,303	1,637	2,049	2,562	25.3%
Retail and E-commerce	1,036	1,315	1,663	2,100	26.5%
Healthcare and Life Sciences	1,115	1,401	1,756	2,196	25.4%
IT and Telecom	535	688	881	1,128	28.2%
Manufacturing	797	1,029	1,325	1,704	28.8%
Government	447	575	737	944	28.3%
Transportation and Logistics	361	465	598	767	28.6%
Travel and Hospitality	744	954	1,219	1,556	27.9%
Others*	175	221	279	353	26.4%
Total	6,512	8,285	10,509	13,310	26.9%

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 20 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL,
2020–2026 (USD MILLION)

Vertical	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
BFSI	3,147	3,874	4,778	5,902	7,303	9,012	11,101	23.4%
Retail and E-commerce	2,607	3,244	4,044	5,050	6,318	7,885	9,825	24.7%
Healthcare and Life Sciences	2,700	3,327	4,108	5,078	6,289	7,769	9,580	23.5%
IT and Telecom	1,418	1,788	2,258	2,856	3,619	4,575	5,774	26.4%
Manufacturing	2,152	2,725	3,456	4,390	5,585	7,088	8,980	26.9%
Government	1,188	1,499	1,895	2,399	3,042	3,848	4,859	26.5%
Transportation and Logistics	968	1,223	1,549	1,965	2,496	3,163	4,002	26.7%
Travel and Hospitality	1,952	2,455	3,093	3,903	4,934	6,223	7,835	26.1%
Others*	438	545	679	849	1,064	1,331	1,663	24.9%
Total	16,571	20,681	25,861	32,391	40,651	50,895	63,618	25.1%

e: estimated; p: projected

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest million, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The BFSI vertical is projected to account for the largest market size during the forecast period due to the sensitivity of financial big data and need to coordinate with numerous other verticals, including stock exchanges, tax authorities, central banks, securities controlling authorities, and revenue department. The emergence of data analytics in finance has necessitated the development of EMM solutions that are capable enough of handling data in real-time. Numerous banks have turned to EMM solutions for data preparation, integration, and analysis from a variety of internal divisions, including mortgage, loans, consumer and retail banking, individual and corporate lending, and treasury banking.

The manufacturing vertical is projected to register the highest CAGR during the forecast period. Manufacturing organizations have greatly benefited from the introduction of enterprise mobility. EMM solutions can allow admins to remotely track warehouse management in real-time while also maintaining a history of the material location and its tracking.

9.2 BANKING, FINANCIAL SERVICES, AND INSURANCE

Customers have more ways than ever to interact with their financial service providers. Technology enables financial institutions to meet their customers at different touchpoints and deliver differentiated and unique experiences. A face-to-face meeting at a branch that uses a tablet to demonstrate an application is a very different experience than calling a contact center to discuss investment options using a laptop at home. Mobility gives users a degree of connectedness and autonomy that they previously have not had.

Employees see the benefits of mobile technology too, and often, they get it by bringing their own mobile devices to work. In the past, IT departments provided users with securely configured desktops and BlackBerries. Now, however, employees come in with their own laptops, PCs, smartphones, and tablets because they are an integral part of their lives. In many cases, these personal devices are more advanced and powerful than what the workplace provides. Employees often prefer to access corporate networks with their own devices when they are in the office, or even while on the road. EMM supports mobile workforce, deploys customer-centric workflow at branches, and improves employee satisfaction by executing mobility initiatives such as BYOD. It can help the mobile workforce to access corporate data and collaborate securely while on the move, track the devices in real-time, silently install or push app updates, and enforce compliance policies. Cellular data expense management functionality and international roaming monitoring features are also useful that keep the bank's mobile data costs under control. Device security is also one of the most prominent features of this sector. The security compliance and ordinance obligations are very daunting for BFSI firms; hence, enterprises need to remain highly cautious about information security and integrity. Undoubtedly, the BFSI workforce has to carry sensitive customer financial, accounts, and identification data on their handheld devices. The data remains vulnerable to misuse and threats. For instance, a lost or stolen handheld device will be a great threat to customer data, and may cause irreversible damage to an enterprise's reputation for mishandling it. An EMM solution will allow the admin to remotely wipe or lock the devices in case of lost or theft. It can detect if any device has been jailbroken and restrict employees from installing unapproved apps. Thus, an EMM solution not only increases the overall security of the customer data but the devices as well.

9.3 GOVERNMENT

Governments across the world have started taking big data as a potential resource to collect valuable insights for formulating efficient policies and development plans. The adoption of big data is helpful to build strategies in defense, security, and public safety areas. EMM solutions are beneficial for analyzing complex and large data collected over the years. In 2012, the US Chief Information Officer of the federal government announced a new federal strategy focused on incorporating mobile technology into federal government activities. Even encryption is not a complete defense as attackers can use techniques such as SSL bumping, certificate spoofing, and other advanced methods to read the encrypted data. They can also redirect the user traffic to URLs that will download exploits such as mRATS and keyloggers.

When it comes to supporting federal workers, agencies must also develop plans for operating off the network, when Wi-Fi and wireless aren't available to federal workers and military personnel in the field. Agencies must overcome the obstacles that prevent workers from accessing, using, and updating relevant work data via mobile devices. EMM solutions can help ensure the device is more secure and also use VPNs and containers to try and protect the data at rest and in transit. However, they do not provide constant threat analysis of applications installed or real-time behavioral analysis of the network traffic.

9.4 HEALTHCARE AND LIFE SCIENCES

The healthcare and life sciences vertical is under constant pressure to enhance its services delivered to patients. Unstructured data in the healthcare vertical is growing exponentially. The access to unstructured data, such as output from medical devices, image reports, and lab reports, is not useful to improve patient health. The adoption of EMM solutions helps the vertical to gather real-time data insights for improving patient health. As 80% of the healthcare data is unstructured, it is a challenge for the healthcare and life sciences vertical to utilize the data it collects and leverage it effectively for clinical operations, medical research, and treatment courses. Hospitals and other healthcare organizations must ensure they comply with various industry compliance standards such as HIPAA, which help secure patients' personally-identifiable information (PII) on mobile devices. With an EMM solution, organizations can meet these compliance standards while accessing and storing patient records on mobile devices. Healthcare and life sciences EMM use cases include patient experience and outcomes, healthcare billing analytics, real-time alerting, and telemedicine. Healthcare facilities across the world have started using EMM solutions to optimize costs and improve profit margins.

9.5 RETAIL AND E-COMMERCE

An increasing number of retail activities and large-scale operations of large players have increased the importance of mobility in the retail sector. As some retail companies operate globally and have offices in several cities and towns, the use of mobile phones has become crucial for employees working in the retail sector. With a large number of mobile phone users in the retail vertical, the demand for EMM is expected to grow. Retail distribution centers need to monitor their networks to keep track of current trends and deliver a superior customer experience. With the emergence of online stores, the customer base is expected to increase in the e-commerce sector, and retailers have started facing pressure to be up-to-date and know more about the customers' shopping experience. These challenges can be addressed with the help of real-time insights. Mobile devices play an important role in improving the operations of the retail sector. They help improve the customer experience, employee efficiency, and the overall functioning of the business. Mobile devices provide employees with real-time product information, corporate data, and stock details. Therefore, managing mobile devices is an important task for retail companies. With retail stores using mobile devices as digital signage and self-service devices, it is essential to ensure these devices do not leave the premises. EMM tools have the capabilities to ensure the devices cannot leave a specific geographical location.

EMM solutions help retailers manage and control both iOS and Android mobile devices. These solutions also improve the employees' productivity, boost customer engagement, streamline device management, and increase sales leads. Moreover, EMM vendors offer kiosk management solutions for Point of Sale (PoS) systems to ensure compliance with the Payment Card Industry (PCI) Act. An efficient EMM software, designed specifically for the retail vertical offers features such as multi-OS support, BYOD for customers, fast and simple switching between multiple users, specific compliance policies, certificate-based authentication, and API integration; all these enable the extraction of mobile data for analysis. VMware, MobileIron, SOTI, 42Gears Mobility Systems, Hexnode EMM, and Kaseya are the key vendors that provide EMM solutions for the retail vertical.

9.6 MANUFACTURING

Enterprises are rapidly adopting mobility solutions to improve business operations. They are continually making their processes efficient and lean with enterprise mobility solutions. According to PwC, mobility is the top technological priority for 73% of the interviewed CEOs in the manufacturing industry. Mobility in manufacturing is bringing intensification across all divisions, optimizing from the factory floor to logistics and inventory management. Even leaders in the manufacturing sector understand the hazards of production downtime and predict to increase the competitive benefits of improving productivity using mobile devices and solutions.

EMM allows enterprises to use centralized remote management of every stage of the production process that can be located in different regions and countries. This reduces emissions and logistics costs and also maintains the quality of the product for the end consumer. In this scenario, disruptive mobile technologies are the key to success. EMM solutions drive automation and help to reduce unnecessary and painstaking manual processes, minimize human errors, and increase the transparency of operations. Digitalization ensures improvement in process visualization while receiving real-time updates and status reports. Rugged tablet computers and handheld devices provide technical managers and quality inspectors with all the requisite data for their day-to-day operations. Agility in constant updates during production offers the advantage of maintaining quality to deliver a better customer experience. EMM solutions in the manufacturing sector provide paramount benefits in terms of the customized solutions according to business needs, transparent processes, and greater RoI.

9.7 INFORMATION TECHNOLOGY AND TELECOM

The telecom industry is undergoing a huge transformation, with constantly changing market conditions and increasing digitalization, and also evolving customer requirements, especially from business customers. Businesses are increasingly shifting their communication systems to IP-based services based on instant messenger facilities and Wi-Fi calls. They are making ever greater use of mobile devices to process workflows and are keen to link systems across the board. Telecom companies are under considerable pressure to invest in their future. They need to invest not only in infrastructure and new technologies, but also in new business models for business customers to help them tackle the digital revolution and offer innovative services and added value.

EMM solutions help companies manage their mobile devices efficiently with a view to moving toward a digital workplace. EMM tools help telecom companies independently enhance network security for each channel. Big telecom companies have several verticals, such as marketing, product, sales, HR, IT, and R&D, which are in constant need of information. Using EMM solutions, the existing databases can be suitably mined, and information can be extracted to help respective verticals in decision-making. The adoption of EMM would help IT departments to improve individual operations and manage a considerable volume of databases across organizations. As companies are becoming more versatile and adopting work from home initiatives, the IT departments are facing challenges in the management of assets. This increases the responsibility of managing assets, which drives the IT vertical to adopt EMM solutions. EMM can be used to manage large data sets. With these solutions, IT engineers can ensure that the data identified and transferred across silos is consistent and accurate.

9.8 TRANSPORTATION AND LOGISTICS

Transportation and logistics companies operate services on multiple routes, often on one or more days of the week. Managing information silos on this account can be a challenge. Therefore, transportation and logistics solutions providers are on a continuous quest to improve services for both their business customers and consumers, lower costs, and increase staff productivity. The right management tools advance all of these goals and must integrate with back-end systems, including CRM, ERP, and payroll and related functions. EMM solutions can capture real-time demand-supply data and offer insights on last-minute changes to the route or fleet to make it more viable by optimizing tonnage and occupancy. In an era of steep real estate prices, warehouse management also becomes critical, both from a utilization and customer service standpoint. EMM can facilitate this by providing accurate data on real-time utilization levels and item locations in warehouses. With transportation and logistics, business crosses international borders, and companies need compliance documents to support trade policies, taxation, legal formalities, and authority forms for different countries. EMM solutions enable companies to capture documents at the “point of entry” to eliminate the cost of processing and delays. Therefore, EMM solutions offer comprehensive and effective ways to focus on meeting customer expectations with the highest quality of service. It enhances productivity across the board, provides remote support to solve problems quickly, and minimizes downtime. It also enables tracking and reporting that yield essential end-to-end visibility across every aspect of mobile transportation and logistics IT solutions.

9.9 TRAVEL AND HOSPITALITY

The travel and hospitality vertical has generated a large volume of data around reservation inquiries, fare charts of trains and airlines, rental cars, and customer feedback. Industry players are investing in data analysis to extract valuable insights from a vast quantity of data to improve services and offerings for increasing their target customers.

Travel companies are using tools to enhance customer experiences, develop better pricing strategies, optimize marketing and sales, avoid operational losses through the real-time scheduling of trains and flights, and perform revenue management. The hospitality vertical, which once overlooked insightful data collected over the years, has started realizing the importance of data availability and using advanced analytical solutions. As the concept of BYOD is gaining momentum in the travel and hospitality vertical, the scope of implementing efficient MDM software for managing the growing number of devices and maintaining clients' confidentiality is also increasing.

9.10 OTHER VERTICALS

Other verticals include education, energy and utilities, and media and entertainment. These verticals can deploy EMM solutions to tackle everyday challenges, thereby increasing overall business efficiency.

Schools, universities, colleges, and educational bodies have large amounts of data related to students and faculties. This data is analyzed to get insights that can improve the operational effectiveness of educational institutions. The education vertical is experiencing a gradual shift from traditional data analysis to effective and efficient analysis with advanced analytical tools. EMM solutions help to understand, measure, and analyze the performance of students. As schools and universities adopt tablet-based learning to enhance the teaching experience, it's essential to ensure these devices are not misused. With an EMM software, educational institutions can lock down devices to specific apps, distribute required study material, restrict access to inappropriate websites and prevent access to certain device functionalities, such as cameras.

The energy industry is experiencing a period of profound transformation. Advancements in the energy revolution have led to more plants generating renewable energy and the trend for increasingly decentralized energy production. This makes it hard to forecast future developments and leads to considerable fluctuations. However, the security of supply still needs to be guaranteed and energy grids still need a constant load, even if this means getting consumers involved and ensuring smart use of energy resources. Devices, especially mobile devices, have a key role to play in this process, allowing customers to submit their meter readings via an app. EMM provides solutions for the central management of devices, which leads to optimized workflows and increases the company's overall service quality and efficiency.

The penetration of smartphones is also expected to increase in the media and entertainment vertical. EMM solutions help media and entertainment organizations manage and secure mobile devices in their enterprise environment. MobileIron, BlackBerry, SOTI, IBM, Microsoft, and VMware provide MDM solutions and services to the other verticals in the EMM market.

10 ENTERPRISE MOBILITY MANAGEMENT MARKET, BY REGION

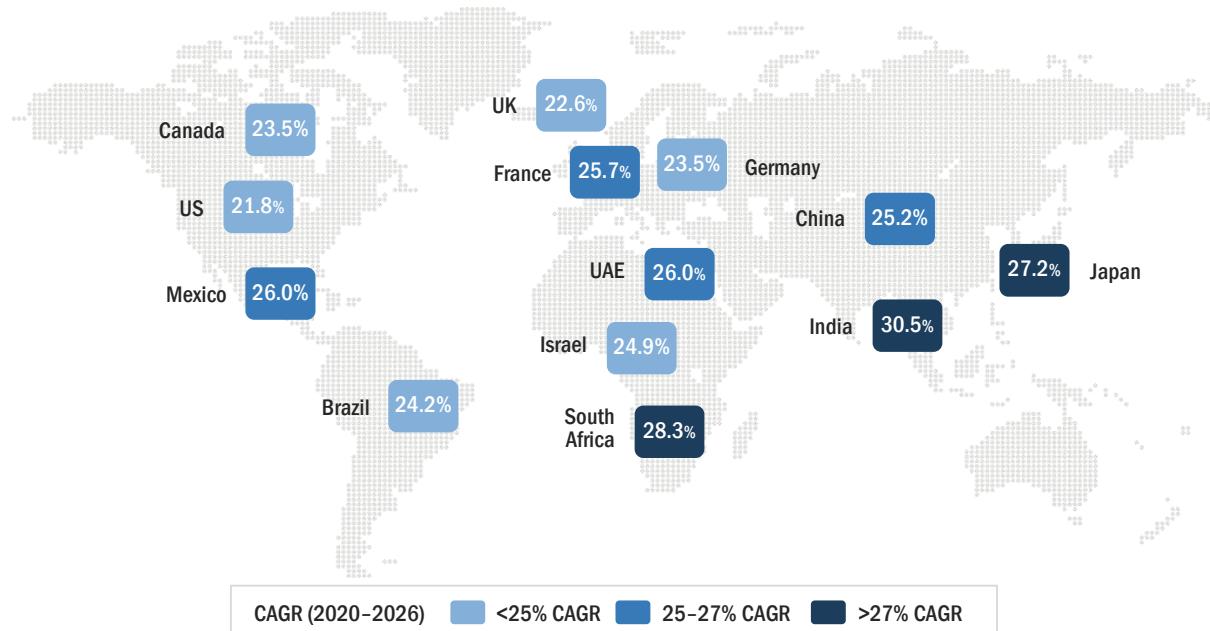
KEY FINDINGS

- North America is estimated to account for the largest market share. It is projected to grow from USD 5,197 million in 2020 to USD 17,431 million by 2026, recording a CAGR of 22.3% during the forecast period. The market growth in this region is due to the high adoption of technologies, such as IoT, analytics, and mobility. Major EMM solution and service vendors are also present in this region.
- The US government provides support by promoting an ideal environment for research and innovation, leading to advancements in various fields of science and technology. The government focuses on enhancing the quality of life of its citizens and has made investments in integrating big data analytics, AI, and ML technologies across EMM solutions, which are projected to drive the growth of the US market.
- The market in the APAC region is projected to register the highest CAGR of 27.8% during the forecast period. The increase in investments for the development of various smart infrastructures, smart cities, and IIoT projects in the region is projected to drive the growth of the APAC market. Businesses in the APAC region are deploying EMM solutions to generate statistical data and make faster business decisions. Countries such as China, India, and Japan are focusing on improving data management to enable data-based business decisions and enhance business processes.
- Changing economic and political conditions, dynamic business environments, and the increased demand for EMM solutions offering visibility and transparency are expected to drive market growth in APAC.
- The market in the MEA region is projected to record a CAGR of 26.8% during the forecast period. Governments in this region are focusing on building an ecosystem and environment promoting digitization across organizations, which would, in turn, drive the growth of the EMM market.

10.1 INTRODUCTION

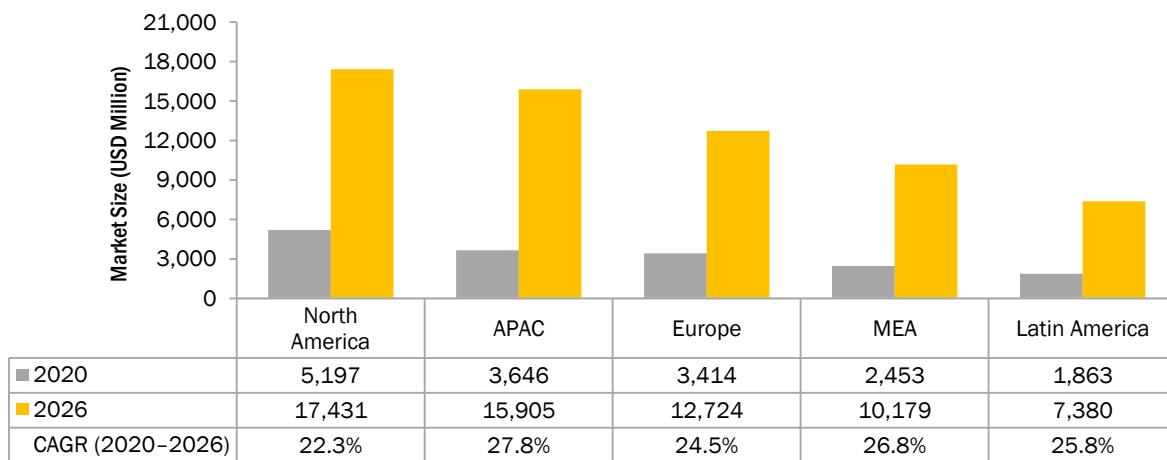
The EMM market has been segmented into five regions: North America, Europe, APAC, MEA, and Latin America. Among these regions, North America is projected to hold the largest market size during the forecast period. Key factors favoring the growth of the North American market include the increase in technological advancements and a rise in the number of key players associated with the market. With the huge proliferation of smartphones in APAC, the need for employee engagement and interaction with enterprises has increased, which is expected to drive the demand for EMM solutions in this region. Europe is projected to account for the second-largest market size during the forecast period. There is rising adoption of EMM solutions for security and MDM, MAM, MCM, identity and access management, and mobile expense management by various organizations across regions for managing and analyzing data to enable faster business decisions.

FIGURE 42 INDIA TO REGISTER THE HIGHEST CAGR DURING THE FORECAST PERIOD



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

FIGURE 43 ASIA PACIFIC TO WITNESS THE HIGHEST CAGR DURING THE FORECAST PERIOD



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 21 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY REGION, 2016–2019 (USD MILLION)

Region	2016	2017	2018	2019	CAGR (2016–2019)
North America	2,214	2,762	3,434	4,262	24.4%
Europe	1,367	1,732	2,186	2,755	26.3%
APAC	1,302	1,698	2,207	2,862	30.0%
MEA	912	1,176	1,513	1,943	28.7%
Latin America	716	916	1,169	1,488	27.6%
Total	6,512	8,285	10,509	13,310	26.9%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 22 ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY REGION, 2020–2026 (USD MILLION)

Region	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
North America	5,197	6,349	7,769	9,516	11,675	14,281	17,431	22.3%
Europe	3,414	4,240	5,276	6,575	8,211	10,230	12,724	24.5%
APAC	3,646	4,653	5,948	7,612	9,756	12,469	15,905	27.8%
MEA	2,453	3,102	3,931	4,988	6,341	8,041	10,179	26.8%
Latin America	1,863	2,337	2,938	3,699	4,667	5,873	7,380	25.8%
Total	16,571	20,681	25,861	32,391	40,651	50,895	63,618	25.1%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

North America is expected to have the largest market share during the forecast period, as most enterprises in the region have already deployed EMM solutions and services, and the trend is expected to continue during the forecast period. The APAC region is expected to grow at the highest CAGR during the forecast period. This region is expected to register continuous growth during the forecast period, majorly due to advancements in various verticals, namely, manufacturing, education, healthcare, transportation and logistics, and retail.

10.2 NORTH AMERICA

North America is projected to be the highest revenue-generating region in the EMM market, with the US accounting for a larger market share than Canada. Both countries have increasingly invested in advanced technologies, such as AI, IoT, and ML, to access the large volume of data in and outside organizations, contributing to the growth of the market in the region. Organizations in the region have adopted the mobile-first strategy to reshape the journey of their employees. The major growth drivers for this region can be attributed to the advanced network technologies, the proliferation of mobile workforce, advanced mobile platforms, and SaaS flexibility used by various enterprises. Currently, 6 out of 10 enterprises in North America have adopted EMM solutions, indicating a significant acceptance of these solutions and services. This region will remain the highest contributor, in terms of revenue generation, for the EMM market.

North America is home to multiple EMM vendors, such as IBM, Microsoft, ManageEngine, and Citrix, who offer EMM solutions and services. These companies target higher revenues and business expansions due to the strong competition across the North American region. Organizations in North America focus on innovations to keep up with the latest technologies in the market. In this region, verticals such as BFSI, retail, and healthcare and life sciences adopt EMM solutions due to various benefits, such as efficient management of day-to-day transactions in the BFSI vertical, improved supply chain management process, and enhanced ability of healthcare machines to track patient health.

10.2.1 NORTH AMERICA: EMM MARKET DRIVERS

- Increasing challenges of companies to determine and manage data insights from multiple sources would drive the growth of the EMM market.
- The growing need to harvest, manipulate, and analyze biomedical past data to understand diseases and human health conditions better during the COVID-19 pandemic would drive the adoption of EMM solutions in the region.
- The growing challenges faced by various verticals, such as BFSI, manufacturing, retail, and healthcare and life sciences, to efficiently process, manage, and store large data sets lead to the adoption of cloud-based EMM solutions.
- According to Domo, a cloud software company, 1.7 MB of data will be created every second for every person on the earth, which will reach over 1,000 quintillion bytes or more than one zettabyte of data every single day by 2020. This data is created by various actions, including swipes, clicks, likes, purchases, search, and streaming. It will grow more as the spread of the Internet widens across the world, leading to an increase in the adoption of EMM solutions.
- The challenges faced with a large amount of organizations' data and the need for extracting insights from the data generated from various devices across organizations would encourage the adoption of EMM solutions and services in North America.
- The increase in investments by the government in various digital initiatives has led to an increase in data generation and data availability, which, in turn, is projected to drive the growth of the EMM market in Canada.

10.2.2 NORTH AMERICA: COVID-19 IMPACT

- Google and Apple collaborated to enable the use of Bluetooth technology with the launch of a comprehensive solution that includes APIs and operating system-level technology to assist in enabling contact tracing for helping government and healthcare agencies reduce the spread of COVID-19.
- The COVID-19 pandemic has highlighted the need for sound data science, visual analytics, and data management methods, as well as the infusion of these skills and literacy into broader groups of users that would drive the adoption of EMM solutions and services.

- HACERA, an enterprise blockchain startup, collaborated with IBM and Oracle to launch the MiPasa platform that simplifies and streamlines the process of sharing and using data from multiple providers, making it accessible to researchers, software developers, and decision-makers worldwide.
- Due to the pandemic's impact, manufacturing companies in the US are projected to witness high adoption of emerging technologies (IoT, AI, and ML) to reduce risk failures in the equipment's working ability.
- According to statistics released by the White House (US), in the pessimistic scenario, the US may witness 240,000 fatalities due to the pandemic.
- The US is moving toward a decentralized model of conducting clinical trials to enable a high patient retention rate because of COVID-19.
- According to a report by MoEngage and Apptopia, the active users of social media apps, including Facebook, Instagram, WhatsApp, Snapchat, and Twitter, have witnessed a huge hit worldwide. In the US, the social media platform, Instagram, has witnessed an increase of nearly 3.6% to 127 million in daily active users between January and March 2020.
- In March 2020, ResilientGrid launched the COVID-19 Quick Start Remote Visualization program designed to quickly and efficiently extend a utility's important operations center data to its remote employees.

10.2.3 NORTH AMERICA: REGULATIONS

10.2.3.1 Health Insurance Portability and Accountability Act of 1996

The Health Insurance Portability and Accountability Act (HIPAA) was signed and brought into law by President Bill Clinton in 1996. The act was passed onto the US legislation to safeguard and protect medical information by maintaining data privacy. The five sections included in the act are as follows:

- HIPAA Title I protects the health insurance cover of individuals and prohibits group health plans from denying coverage to any individual.
- HIPAA Title II establishes national standards for processing electronic healthcare transactions.
- HIPAA Title III includes provisions related to tax and guidelines for medical care.
- HIPAA Title IV includes provisions for individuals with pre-existing conditions and those seeking continued coverage.
- HIPAA Title V includes provisions on company-owned life insurance and treatment of those who lose their US citizenship for income tax purposes.

10.2.3.2 California Consumer Privacy Act

The California Consumer Privacy Act (CCPA) of 2018 gives consumers more control over the personal information that businesses collect about them. This landmark law which secures new privacy rights for consumers in California entails the following:

- The right to know about personal information a business collects about consumers and how it is used and shared
- The right to delete personal information collected from consumers
- The right to opt-out of the sale of their personal information
- The right to non-discrimination for exercising their CCPA rights

10.2.3.3 Gramm-Leach-Bliley Act

The Gramm-Leach-Bliley Act (GLB Act) was implemented in 1999 by the US federal government. It is also known as the Financial Services Modernization Act. The major objective of this act was to maintain the security of private information pertaining to every individual that is handled by financial institutes. It includes provisions to protect the consumer's personal financial information held by banks, securities companies, and insurance companies. Under the jurisdiction of the Federal Trade Commission (FTC), these financial institutions are required to design, implement, and maintain an information security program to protect the privacy and integrity of customer data. Failure to comply can result in dire consequences for businesses, including imprisonment of directors and officers for up to five years, penalties up to USD 100,000 per violation, or both.

10.2.3.4 Health Information Technology for Economic and Clinical Health Act

The Health Information Technology for Economic and Clinical Health (HITECH) Act was signed and brought into law by US President Barack Obama in 2009 as a part of the American Recovery and Reinvestment Act. The act was passed into the US legislation to promote the use of Electronic Health Records (EHR) and support technology. The Subtitle D of the HITECH Act defines privacy and security concerns related to the electronic transmission of health records.

10.2.3.5 Sarbanes-Oxley Act

The Sarbanes-Oxley (SOX) Act of 2002 is a law the US Congress passed on July 30 of that year to help protect investors from fraudulent financial reporting by corporations. It came in response to financial scandals in the early 2000s involving publicly traded companies such as Enron Corporation, Tyco International plc, and WorldCom.

- The act created strict new rules for accountants, auditors, and corporate officers and imposed more stringent recordkeeping requirements.
- The act also added new criminal penalties for violating securities laws.

10.2.3.6 Federal Information Security Management Act

The Federal Information Security Management Act (FISMA) of 2002 enforces stringent standards to ensure the security, confidentiality, and integrity of the US federal property and information. It sets the requirements for each federal agency to create, document, and implement programs that ensure security for the agencies' data and the systems that support the agencies' operations and assets. This extends to state governments that manage federal programs, contractors, and other non-governmental organizations working with and funded by the federal government. Examples of federal programs that states manage are Medicare, Medicaid, and unemployment insurance.

10.2.3.7 Payment Card Industry Data Security Standard

Payment Card Industry Data Security Standard (PCI DSS) compliance is a defacto requirement for all organizations that store, process, or transmit any type of payment card data. The PCI DSS was implemented to ensure the payment card data is secure and prevent credit card fraud. Being PCI compliant is crucial for businesses as any drop from the high-security standards could result in fines, penalties, or even restrict the ability to process payment cards in the future.

PCI DSS has six major objectives, 12 key requirements, 78 base requirements, and over 400 test procedures. The guidelines are also considered security best practices. Its six major requirements include the following:

- Build and Maintain a Secure Network and Systems
- Protect Cardholder Data
- Maintain a Vulnerability Management Program
- Implement Strong Access Control Measures
- Regularly Monitor and Test Networks
- Maintain an Information Security Policy

The most recent PCI DSS version was released in May 2018 and is referred to as version 3.2.1. Overall, the six objectives and 12 requirements outline a series of steps that credit card processors must continually follow. Companies are first asked to assess their networks and systems, including information technology infrastructure, business processes, and credit card handling procedures.

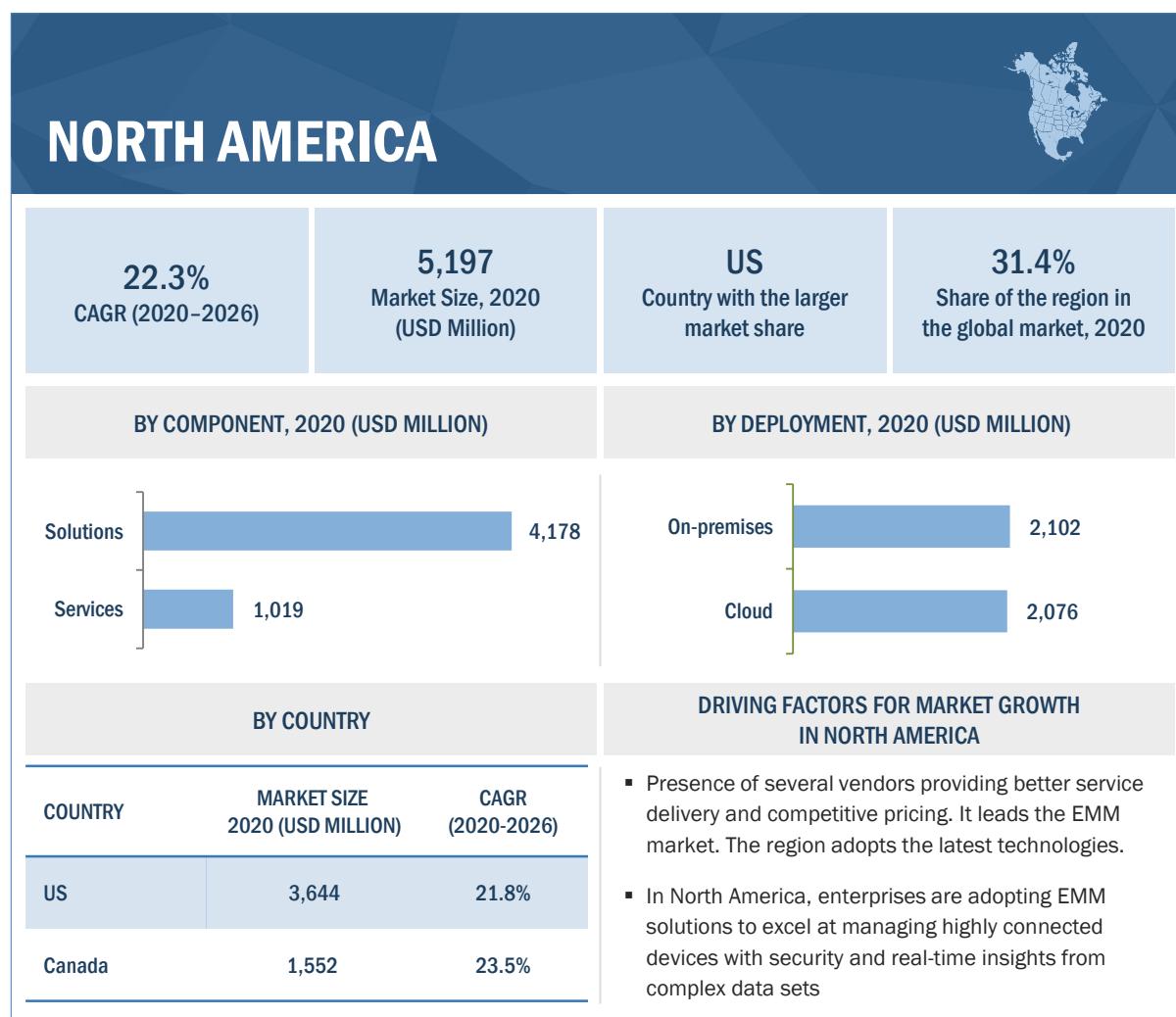
10.2.3.8 Federal Information Processing Standards

Created by the National Institute of Standards and Technology's (NIST's) Computer Security Division, the Federal Information Processing Standards (FIPS) established a data security and computer system standard that organizations must adhere to as per the Federal Information Security Management Act of 2002 (FISMA).

To become FIPS compliant, a US government agency or contractor's computer systems must meet the requirements outlined in the FIPS publications numbered 140, 180, 186, 197, 198, 199, 200, 201, and 202.

- FIPS 140 covers cryptographic module and testing requirements in both hardware and software.
- FIPS 180 specifies how organizations can be FIPS compliant when using secure hash algorithms for computing a condensed message.
- FIPS 186 is a group of algorithms for generating digital signatures.
- FIPS 197 is a standard that created the Advanced Encryption Standard, a publicly accessible cipher approved by the National Security Agency (NSA) for top secret information.
- FIPS 198 is about a mechanism for message authentication that utilizes cryptographic hash functions.
- FIPS 199 standardizes how federal agencies categorize and secure information and information systems the agencies collect or maintain.
- FIPS 200 is a standard that helps federal agencies with risk management through levels of information security based on risk levels.
- FIPS 201 specifies the standard for common identification for federal employees and contractors.

- FIPS 202 gives the specifications for the Secure Hash Algorithm-3 (SHA-3) family of four cryptographic hash functions and two extendable-output functions.

FIGURE 44 NORTH AMERICA: MARKET SNAPSHOT

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 23 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2016–2019 (USD MILLION)

Component	2016	2017	2018	2019	CAGR (2016–2019)
Solutions	1,798	2,237	2,775	3,435	24.1%
Services	416	525	659	827	25.7%
Total	2,214	2,762	3,434	4,262	24.4%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 24 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2020–2026 (USD MILLION)

Component	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Solutions	4,178	5,092	6,215	7,594	9,293	11,339	13,806	22.0%
Services	1,019	1,257	1,554	1,922	2,382	2,942	3,626	23.6%
Total	5,197	6,349	7,769	9,516	11,675	14,281	17,431	22.3%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

In North America, the solutions segment is projected to account for a larger market size during the forecast period. With the significant increase in data consumption due to the adoption of connected devices, the big data analytics, 5G, gaming, and streaming services companies are investing in EMM solutions for faster business decisions. IT and security teams can easily provide data transfers through safe data communications, while leveraging EMM solutions. These solutions can also enable them to reduce data breaches and generate faster business insights. The services segment is projected to register a higher CAGR during the forecast period due to a rise in the adoption of managed services by various vendors in the region, helping decision-makers focus on core business operations and gain high-value outcomes.

TABLE 25 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2014–2019 (USD MILLION)

Service	2014	2015	2016	2017	2018	2019	CAGR (2014–2019)
Managed Services	204	218	255	320	399	498	25.0%
Professional Services	110	118	161	205	260	329	26.8%
Total	314	336	416	525	659	827	25.7%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 26 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2020–2026 (USD MILLION)

Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Managed Services	610	749	921	1,133	1,395	1,714	2,100	22.9%
Professional Services	408	508	633	790	986	1,228	1,525	24.6%
Total	1,019	1,257	1,554	1,922	2,382	2,942	3,626	23.6%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The growth of managed services in the region is attributed to the rise in the adoption of work-from-home initiatives by various companies owing to the COVID-19 pandemic, which has, in turn, increased the demand for EMM and analytics managed services in the market. This increase in demand is attributed to the rising focus of companies on investing in business-critical tasks.

TABLE 27 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2016–2019 (USD MILLION)

Professional Service	2016	2017	2018	2019	CAGR (2016–2019)
Consulting	70	88	111	139	26.0%
Support and Maintenance	55	71	91	116	27.9%
Deployment and Integration	36	46	58	74	26.5%
Total	161	205	260	329	26.8%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 28 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2020–2026 (USD MILLION)

Professional Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Consulting	172	213	264	327	406	502	620	23.8%
Support and Maintenance	145	182	229	288	362	455	570	25.6%
Deployment and Integration	91	113	141	175	218	271	336	24.3%
Total	408	508	633	790	986	1,228	1,525	24.6%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

Based on professional service, the consulting segment is projected to account for the largest market size during the forecast period. This growth is attributed to highly technical consultants helping businesses create the right IoT strategy for moving toward the digital transformation initiative or finding the right approach. Consulting services would help train people, particularly in mid-market companies with less mature security models. The support and maintenance segment is projected to register the highest CAGR during the forecast period. With rapid technological advancements, constant investments in solution maintenance and development would encourage the adoption of support and maintenance services.

TABLE 29 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2016–2019 (USD MILLION)

Organization Size	2016	2017	2018	2019	CAGR (2016–2019)
Large Enterprises	1,436	1,776	2,188	2,691	23.3%
SMEs	778	986	1,246	1,571	26.4%
Total	2,214	2,762	3,434	4,262	24.4%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 30 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2020–2026 (USD MILLION)

Organization Size	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Large Enterprises	3,251	3,935	4,770	5,788	7,033	8,520	10,298	21.2%
SMEs	1,946	2,414	2,999	3,729	4,642	5,761	7,133	24.2%
Total	5,197	6,349	7,769	9,516	11,675	14,281	17,431	22.3%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

In North America, the large enterprises segment is estimated to account for a larger market size in 2020. Large enterprises have the funding to adopt EMM solutions, as they have the resources and budget, and there will be more data to classify based on the size of the company. The SMEs segment is projected to register a higher CAGR during the forecast period, owing to the rapid growth of SMEs that focus on leveraging data for improving analytics and enabling data-based business decisions.

TABLE 31 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2016–2019 (USD MILLION)

Deployment Mode	2016	2017	2018	2019	CAGR (2016–2019)
On-premises	955	1,173	1,436	1,753	22.4%
Cloud	842	1,064	1,340	1,682	25.9%
Total	1,798	2,237	2,775	3,435	24.1%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 32 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2020–2026 (USD MILLION)

Deployment Mode	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
On-premises	2,102	2,526	3,039	3,659	4,412	5,303	6,359	20.3%
Cloud	2,076	2,566	3,176	3,935	4,881	6,036	7,447	23.7%
Total	4,178	5,092	6,215	7,594	9,293	11,339	13,806	22.0%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

In North America, the on-premises segment is projected to account for a larger market size during the forecast period. This growth is attributed to the deployment of resources in-house in IT infrastructure to increase the security and privacy of data within organizations. The cloud segment is projected to register a higher CAGR due to the ability of cloud solutions to offer centralized monitoring and analytics solutions. The increase in the adoption of SaaS solutions is also projected to contribute to the growth of the cloud segment.

TABLE 33 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2016–2019 (USD MILLION)

Solution	2016	2017	2018	2019	CAGR (2016–2019)
MDM	680	837	1,025	1,254	22.6%
MAM	601	745	920	1,134	23.5%
MCM	216	273	344	433	26.1%
Mobile Expense Management	164	208	264	333	26.8%
Identity and Access Management	137	175	222	282	27.3%
Total	1,798	2,237	2,775	3,435	24.1%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 34 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2020–2026 (USD MILLION)

Solution	2019	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
MDM	1,254	1,506	1,813	2,185	2,635	3,183	3,833	4,604	20.5%
MAM	1,134	1,373	1,665	2,023	2,460	2,997	3,640	4,411	21.5%
MCM	433	535	662	820	1,018	1,264	1,565	1,933	23.9%
Mobile Expense Management	333	414	514	640	797	994	1,236	1,532	24.4%
Identity and Access Management	282	351	438	547	683	855	1,066	1,325	24.8%
Total	3,435	4,178	5,092	6,215	7,594	9,293	11,339	13,806	22.0%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

By solution, the identity and access management segment is estimated to lead the market in North America during the forecast period, in terms of growth rate. This segment's growth is attributed to the increase in risks around data privacy and security across verticals, such as BFSI, manufacturing, retail, healthcare, and life sciences, thereby encouraging the adoption of EMM solutions and services. The MDM segment is projected to dominate during the forecast period due to the increasing focus of organizations to analyze the location of sensitive data and accelerate the discovery, management, and protection of sensitive data at scale to better meet evolving PII compliance regulations.

TABLE 35 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2016–2019 (USD MILLION)

Vertical	2016	2017	2018	2019	CAGR (2016–2019)
BFSI	443	546	670	820	22.8%
Retail and E-commerce	352	439	544	674	24.2%
Healthcare and Life Sciences	379	467	574	704	22.9%
IT and Telecom	182	229	288	361	25.7%
Manufacturing	271	343	433	546	26.3%
Government	152	192	241	303	25.8%
Transportation and Logistics	123	155	195	245	25.9%
Travel and Hospitality	253	318	399	499	25.4%
Others*	60	74	90	110	22.5%
Total	2,214	2,762	3,434	4,262	24.4%

*Others include education, energy and utilities, and media and entertainment.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 36 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2020–2026 (USD MILLION)

Vertical	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2025)
BFSI	987	1,190	1,437	1,737	2,101	2,535	3,050	20.7%
Retail and E-commerce	821	1,001	1,222	1,494	1,829	2,234	2,721	22.1%
Healthcare and Life Sciences	848	1,023	1,236	1,495	1,811	2,186	2,634	20.8%
IT and Telecom	445	550	680	841	1,043	1,288	1,588	23.6%
Manufacturing	675	837	1,039	1,290	1,605	1,991	2,463	24.1%
Government	373	461	570	706	876	1,083	1,335	23.7%
Transportation and Logistics	302	374	463	574	712	881	1,088	23.8%
Travel and Hospitality	613	754	930	1,148	1,418	1,748	2,149	23.3%
Others*	133	159	192	231	279	336	403	20.4%
Total	5,197	6,349	7,769	9,516	11,675	14,281	17,431	22.3%

e: estimated; p: projected

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

By vertical, the BFSI segment is estimated to account for the largest market size in North America in 2020. This segment's growth is attributed to the use of EMM solutions for efficient management of financial transactions, enhancing customer experience, and handling enormous volumes of sensitive data. The manufacturing segment is projected to register the highest CAGR during the forecast period, owing to the technological shift and to improve customer relations and market research for the logistics and supply chain in manufacturing in North America.

TABLE 37 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2016–2019 (USD MILLION)

Country	2016	2017	2018	2019	CAGR (2016–2019)
US	1,578	1,961	2,428	3,001	23.9%
Canada	636	801	1,006	1,261	25.6%
Total	2,214	2,762	3,434	4,262	24.4%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 38 NORTH AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2020–2026 (USD MILLION)

Country	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
US	3,644	4,434	5,403	6,591	8,052	9,808	11,921	21.8%
Canada	1,552	1,915	2,366	2,925	3,623	4,473	5,510	23.5%
Total	5,197	6,349	7,769	9,516	11,675	14,281	17,431	22.3%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The US is estimated to account for a larger share of the North American market in 2020 due to the increase in government initiatives for smart infrastructure developments in the country. The US also has a large base of EMM vendors and end users. Quest Software, one of the leading EMM solution providers, offers KACE Cloud Mobile Device Manager to US customers to easily enroll mobile devices, build a comprehensive inventory, systemically manage and configure devices, and secure their business resources, regardless of device ownership. The government's support to companies for investing in EMM solutions is also projected to encourage the growth of the EMM market in the region. The market in Canada is projected to register a higher CAGR during the forecast period. Canada is a global leader in mobile and cloud adoption, and SMEs in this country have started leveraging cloud-based analytical tools, such as Microsoft Azure, to collect, process, and discover large sets of sensitive data.

10.2.4 US

The US is inclined toward innovations with customer demand in the country focused on more advanced solutions. Growth in terms of infrastructure, innovation, and digitalization initiatives has led to the EMM market's growth in the country. In the recent past, the US had witnessed major developments in AI technology in terms of regulations, R&D, and automation. According to the Federal Data Release in 2016, enterprises in the US have contributed to the adoption of new technologies in the country, as they invest significantly in R&D activities and innovations. For instance, Oracle invested USD 0.92 billion in R&D activities in 2017. These investments have resulted in the high adoption of EMM solutions in the country. The US government has also provided support through the implementation of rules and regulations that benefit digitalization. It focuses on investments in technologies, such as big data analytics, IoT, and NLP, which would help data scientists generate high-value services for data discovery, security threat detection, and production process improvements. Nearly half of the US companies say that analytics is more important now than before the COVID-19 pandemic, according to new, joint research by Sisense and Meidata. Acquisitions and mergers by IBM, Microsoft, and SAP have contributed to the growth of the EMM market in the US. Vendors in the country are investing in smart infrastructure initiatives for providing real-time access to data for managers to make timely decisions and increase the company's business revenue.

10.2.5 CANADA

The EMM market in Canada is projected to grow at a CAGR of 23.5% during the forecast period. The Canadian government has become majorly dependent on the Internet; in a sense, it offers commonly used services online. These services include data management applications, employment insurance, and tax returns. As a result, the level of sophisticated cyberattacks has also increased. Therefore, Canadian organizations are adopting EMM solutions to protect sensitive data. The country witnesses a faster adoption rate of cloud-based solutions that would help enterprises to easily run solutions in a cost-effective cloud environment. SMEs are moving toward information governance, which would provide more security, privacy, and ownership of data. Canadian organizations also enforce rules and regulations that would make data sets legally open at all levels of the government to ensure enhanced data access for users. For instance, Tableau, through the dashboard interface solution, helps data analysts generate data insights. The country has also set up an institution, Canada.ai, which would provide information related to advancements in AI and ML research to various startups and enterprises. The increase in the number of mobile devices, clubbed with the increasing BYOD trend in organizations and the presence of major vendors of the EMM market, such as BlackBerry and SOTI, are expected to be the factors responsible for the growth of the EMM market in Canada.

10.3 EUROPE

The major European countries contributing to the growth of the EMM market include the UK, France, and Germany. Europe is among the early adopters of advanced technologies due to the technical expertise of enterprises in the region. Though businesses in the region witness slow adoption trends, they are focusing on digital transformation, particularly with the integration of new technologies, such as IoT, ML, and AI. According to ThreatMetrix, businesses in Europe are being targeted by bot attacks on a massive scale, resulting in a 66% rise in cyberattacks since 2016. The company also mentioned that new account creation frauds are becoming a major concern in Europe, having over 10% fraudulent account registrations. Hence, organizations are expected to deploy EMM solutions to tackle various business challenges.

The Big Data Value Association in Europe estimated that the number of organizations producing and supplying data-related products and services would reach nearly 350,000 by 2020 from 257,000 in 2014, and data users could be more than 1.3 million by 2020. The European Commission (EC) introduced the European Data Portal, which has a segment named Open Data that can be purchased by public bodies and is freely available for reuse. Open Data helps organizations to gain easy access to a large volume of data sets. For many companies present in the European region, data integration adoption is increasing at a fast pace using traditional ETL tools, data wrangling tools on Hadoop, self-service data preparation, and custom code. The scalable feature of Hadoop storage enables the successful implementation of storage and analytics, contributing to the growth of the EMM market in the European region. Presently, the growth in the EMM market is expected to be driven by increasing trends of CYOD and BYOD across businesses. Employees prefer to access business information via mobile devices, which is expected to increase the demand for EMM solutions in the region indirectly. An increasing number of organizations are adopting the mobile-first approach and creating a mobile application environment for their employees, which is not only more secure, open, and scalable, but also improves workforce productivity and operational efficiency. The key factor for this increase in adoption can be attributed to the growing demand for contracted apps across all verticals, such as BFSI, government, education, retail, and manufacturing and automotive. Due to stringent rules and regulations, businesses prefer to adopt on-premises EMM solutions. However, over the last 2 years, the trend has shifted to cloud-based EMM solutions, owing to their wide range of functionalities and features. SMEs are expected to adopt cloud-based EMM solutions majorly. The countries that constitute a major portion of the market include the UK, Germany, and France.

10.3.1 EUROPE: EMM MARKET DRIVERS

- The lower cost of analytical components, rise in the adoption of cloud and IoT, and an increase in the usage of online platforms are some of the key factors encouraging the growth of the EMM market in this region.
- The rapid innovation in various AI technologies by French vendors is projected to encourage the growth of the country's GDP.
- The growing concerns over privacy and security issues of customer data across the BFSI vertical would drive the adoption of EMM solutions in the region.
- The EU's focus on helping its companies and startups access data gathered from connected objects is projected to increase the adoption of EMM solutions in the region.
- The EU's focus on helping companies and startups to invest in R&D activities for improving technology solutions and offering EMM cloud services is projected to drive the market growth in the region.
- Government authorities' certification for data governance and security is projected to encourage the adoption of EMM solutions among end users for their business growth.
- Companies in the UK are investing in EMM solutions to explore newer or untapped sources of data and enhance data-driven business decision-making, which is projected to drive the growth of the market in the UK.

10.3.2 EUROPE: COVID-19 IMPACT

- The EC launched a data portal to increase access to data sets and tools for scientists studying the SARS-CoV-2 virus.
- According to Fitch Ratings, a European credit rating agency, a deep and prolonged recession is projected to lead to repercussions on electricity demand and prices during the COVID-19 situation.
- The details of the long-term and extensive impacts of COVID-19 are currently unknown. However, the pandemic has impacted the supply chain operations across a wide variety of companies in Europe.
- The impact of the COVID-19 pandemic on Europe has been increasing, with lockdowns introduced in most countries. This has resulted in the growth of pressure on the healthcare industry.
- ELIXIR, the European research infrastructure for life science data, provides open access to data, tools, and workflows in response to the COVID-19 pandemic.
- The EU will provide a Data Management Plan (DMP) to address the relevant aspects of making the data findable, accessible, interoperable, and re-usable.
- COVID-19 would have a short-term impact on manufacturing industries. Post the lockdown period, companies will witness new opportunities in digital transformation in Italy.
- In March 2020, the European Banking Authority issued a statement urging the European payments industry to increase contactless transaction limits to USD 54.97 during the COVID-19 pandemic.
- Companies in the manufacturing industry remain the most impacted due to COVID-19, followed by other industries, such as BFSI, retail, real estate, and automotive. EMM is projected to enable organizations to understand their needs and design the right responses in this crisis.

10.3.3 EUROPE: REGULATIONS

10.3.3.1 General Data Protection Regulation

The General Data Protection Regulation (GDPR) (Regulation [EU] 2016/679) is a regulation by which the European Parliament, the Council of the European Union (EU), and the EC ensure the safety of EU citizens from privacy and data breaches. The GDPR extends the scope of the EU data protection law for all foreign organizations that process data of EU citizens. It delivers the coordination of the data protection regulations throughout the EU, making it easier for non-European companies to comply with the regulations. However, if the regulations are not introduced, companies may have to pay 4% of their worldwide turnover as a penalty. Key privacy and data protection requirements of the GDPR include:

- Confidentiality of collected data to ensure data protection
- Safe transfer of data across borders
- Seeking consent of subjects for data processing
- Providing data breach notifications

GDPR would impose consistent data security law for all the EU members and the companies marketing goods and services to EU residents, irrespective of the location.

10.3.3.2 European Committee for Standardization

The European Committee for Standardization (CEN) is a government body that works along with the ISO and was established to develop IoT standards in Europe. It imposes rules and regulations for integrating the data collected from sensors with the existing RFID-driven barcode systems.

10.3.3.3 European Technical Standards Institute

The European Technical Standards Institute (ETSI) is an independent standardization organization in the telecommunications industry in Europe. It imposes globally applicable ICT standards for equipment makers and network operators based on radio, fixed, mobile, broadcast, and Internet technologies. The new technical committee has developed standards for Machine-to-Machine (M2M) communications, wireless sensor networks, and RFID. TR 1030290, TR 103 315, and TR 102 857 are a few standards imposed by the ETSI team to help regulate information and technology services and RFID deployment.

TABLE 39 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2016–2019 (USD MILLION)

Component	2016	2017	2018	2019	CAGR (2016–2019)
Solutions	1,111	1,403	1,766	2,220	26.0%
Services	257	329	420	535	27.8%
Total	1,367	1,732	2,186	2,755	26.3%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 40 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2020–2026 (USD MILLION)

Component	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Solutions	2,743	3,398	4,216	5,241	6,526	8,108	10,057	24.2%
Services	670	842	1,059	1,335	1,685	2,122	2,667	25.9%
Total	3,414	4,240	5,276	6,575	8,211	10,230	12,724	24.5%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 41 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2016–2019 (USD MILLION)

Service	2016	2017	2018	2019	CAGR (2016–2019)
Managed Services	157	200	254	322	27.1%
Professional Services	99	128	165	213	28.8%
Total	257	329	420	535	27.8%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 42 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2020–2026 (USD MILLION)

Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Managed Services	402	502	628	787	988	1,237	1,545	25.2%
Professional Services	269	340	431	548	697	885	1,121	26.9%
Total	670	842	1,059	1,335	1,685	2,122	2,667	25.9%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 43 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2016–2019 (USD MILLION)

Professional Service	2016	2017	2018	2019	CAGR (2016–2019)
Consulting	43	55	70	90	28.0%
Support and Maintenance	34	45	58	75	30.0%
Deployment and Integration	22	29	37	48	28.8%
Total	99	128	165	213	28.8%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 44 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2020–2026 (USD MILLION)

Professional Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Consulting	113	142	179	225	285	359	451	26.0%
Support and Maintenance	96	122	156	200	256	328	419	27.9%
Deployment and Integration	60	76	97	123	156	198	251	26.8%
Total	269	340	431	548	697	885	1,121	26.9%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 45 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2016–2019 (USD MILLION)

Organization Size	2016	2017	2018	2019	CAGR (2016–2019)
Large Enterprises	901	1,131	1,415	1,767	25.2%
SMEs	467	601	771	988	28.4%
Total	1,367	1,732	2,186	2,755	26.3%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 46 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2020–2026 (USD MILLION)

Organization Size	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Large Enterprises	2,170	2,670	3,292	4,065	5,029	6,205	7,644	23.4%
SMEs	1,244	1,569	1,984	2,510	3,183	4,024	5,079	26.4%
Total	3,414	4,240	5,276	6,575	8,211	10,230	12,724	24.5%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 47 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2016–2019 (USD MILLION)

Deployment Mode	2016	2017	2018	2019	CAGR (2016–2019)
On-premises	602	750	931	1,155	24.3%
Cloud	509	653	835	1,065	27.9%
Total	1,111	1,403	1,766	2,220	26.0%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 48 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2020–2026 (USD MILLION)

Deployment Mode	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
On-premises	1,408	1,719	2,104	2,578	3,164	3,873	4,733	22.4%
Cloud	1,336	1,678	2,113	2,663	3,363	4,235	5,324	25.9%
Total	2,743	3,398	4,216	5,241	6,526	8,108	10,057	24.2%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 49 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2016–2019 (USD MILLION)

Solution	2016	2017	2018	2019	CAGR (2016–2019)
MDM	420	525	653	812	24.5%
MAM	372	467	586	732	25.4%
MCM	134	171	219	280	27.9%
Mobile Expense Management	101	131	168	216	28.7%
Identity and Access Management	84	109	140	181	29.2%
Total	1,111	1,403	1,766	2,220	26.0%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 50 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2020–2026 (USD MILLION)

Solution	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
MDM	991	1,213	1,487	1,826	2,246	2,755	3,374	22.7%
MAM	901	1,110	1,371	1,695	2,101	2,597	3,205	23.6%
MCM	351	441	555	700	884	1,113	1,400	26.0%
Mobile Expense Management	272	344	435	551	700	885	1,118	26.6%
Identity and Access Management	229	290	369	469	597	757	959	27.0%
Total	2,743	3,398	4,216	5,241	6,526	8,108	10,057	24.2%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 51 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2016–2019 (USD MILLION)

Vertical	2016	2017	2018	2019	CAGR (2016–2019)
BFSI	274	342	426	530	24.6%
Retail and E-commerce	218	275	347	436	26.1%
Healthcare and Life Sciences	234	293	365	455	24.7%
IT and Telecom	112	144	184	234	27.7%
Manufacturing	167	215	276	354	28.3%
Government	94	120	154	196	27.9%
Transportation and Logistics	76	97	125	159	28.1%
Travel and Hospitality	156	199	254	322	27.4%
Others*	37	45	56	69	23.4%
Total	1,367	1,732	2,186	2,755	26.3%

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 52 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2020–2026 (USD MILLION)

Vertical	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
BFSI	648	794	974	1,197	1,473	1,809	2,216	22.8%
Retail and E-commerce	539	669	830	1,033	1,288	1,601	1,987	24.3%
Healthcare and Life Sciences	556	682	837	1,030	1,269	1,559	1,912	22.9%
IT and Telecom	293	368	462	582	734	924	1,160	25.8%
Manufacturing	445	561	709	897	1,136	1,436	1,812	26.4%
Government	246	310	390	492	622	785	987	26.0%
Transportation and Logistics	200	252	318	401	507	640	807	26.2%
Travel and Hospitality	403	505	633	796	1,002	1,258	1,578	25.6%
Others*	83	100	122	148	180	218	263	21.2%
Total	3,414	4,240	5,276	6,575	8,211	10,230	12,724	24.5%

e: estimated; p: projected

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 53 EUROPE: ENTERPRISE MOBILITY MANAGEMENT SIZE, BY COUNTRY, 2016–2019 (USD MILLION)

Country	2016	2017	2018	2019	CAGR (2016–2019)
UK	427	533	664	825	24.5%
Germany	385	483	605	757	25.3%
France	240	307	391	497	27.5%
Rest of Europe*	316	408	526	676	28.9%
Total	1,367	1,732	2,186	2,755	26.3%

*Rest of Europe includes Italy, Spain, the Netherlands, and Switzerland.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 54 EUROPE: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2020–2026 (USD MILLION)

Country	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
UK	1,007	1,233	1,511	1,856	2,282	2,799	3,426	22.6%
Germany	930	1,146	1,414	1,748	2,165	2,674	3,298	23.5%
France	622	780	979	1,232	1,552	1,951	2,448	25.7%
Rest of Europe*	854	1,081	1,371	1,740	2,213	2,806	3,551	26.8%
Total	3,414	4,240	5,276	6,575	8,211	10,230	12,724	24.5%

e: estimated; p: projected

*Rest of Europe includes Italy, Spain, the Netherlands, and Switzerland.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

10.3.4 UK

The UK is one of the strongest economies in Europe. The country focuses on enhancing civil services with the adoption of EMM solutions. The adoption of cloud services in the UK has increased, leading to advancements in technologies and improved customer experience. Also, the increasing trend of BYOD is becoming complex for various IT departments due to the growing threat of exposure to various kinds of risks. Hence, organizations are looking for a comprehensive solution that would help them meet all regulatory, compliance, and risk-related processes. Organizations across the country are primarily focused on delivering EMM solutions that can help users automate GRC processes, such as audit management, compliance management, risk assessment, and third-party assurance. Stringent regulations, such as GDPR, are projected to drive the demand for EMM solutions in this country. The EMM market in the UK is projected to witness significant growth due to the urgent need to prevent the increasing number of security breaches and incidents. The government is exploring the potential use of advanced security and compliance solutions to assist in managing the high volumes of data in organizations. HANDD Business Solutions, one of the market leaders in data protection and discovery in the UK, ensures the correct handling and monitoring of sensitive information, both in and outside organizations. Companies in the UK are investing mainly in advanced analytics capabilities to harness the full benefits of EMM.

10.3.5 GERMANY

Germany can be considered as a growing market for the adoption of EMM solutions. The rapid digitization across brain training solutions through AI technology in the country is projected to drive the growth of the EMM market. To increase digitalization, the German government is projected to spend around USD 4 billion on AI products and services by 2025. Similar investments from private companies are likely to make Germany a leading market for EMM. Moreover, the GDPR has led to increased investments and regional cloud network development in the country. Businesses and citizens in Germany are dependent on the reliable functioning of ICT and the Internet. Therefore, the confidentiality of business-related data and information has become important. The EMM market is projected to witness high growth opportunities in Germany, as the major players are focusing on adopting data security solutions.

In August 2020, Auritas, one of SAP's partners in holistic data management, announced its strategic partnership with BigID, a provider of EMM and intelligence platforms for privacy, protection, and perspective. Through this strategic partnership, Auritas and BigID are projected to drive more value and insights from enterprise data for SAP customers by leveraging data intelligence and discovery for data minimization, classification, and management. Also, the partnership enables SAP customers to identify at-risk data across the enterprise while incorporating a data intelligence and device management solution to dispose of unwanted and redundant data both inside and outside of their SAP systems.

10.3.6 FRANCE

France is gaining momentum in the adoption of advanced analytical technologies. The increasing adoption of cloud-based solutions is one of the major factors driving the growth of the EMM market in France. Technology startups, such as Pathoquest and Cliris, are transforming France's EMM market, driving the growth of EMM in the country. The French government is also investing in EMM technologies that would benefit various business sectors, including manufacturing, retail, and BFSI, contributing to the country's GDP growth. The French government is also investing in digital infrastructure to drive the growth of the EMM market. In September 2018, the government launched its new digital inclusion strategy to improve access to digital skills and infrastructure for 6.7 million citizens that still do not use the Internet. The plan intends to support 1.5 million people each year.

France has several buyers of EMM solutions, including national, regional, and local governments and private enterprises that are driving the growth of the smart ecosystem in the country. The growing government initiatives on smart city projects will further fuel the need for data security and privacy, eventually driving the demand for EMM solutions in the country.

10.3.7 REST OF EUROPE

Prominent countries in the region are Italy, Spain, the Netherlands, and Switzerland. These countries are witnessing signs of growth in the EMM market. Spain offers substantial growth opportunities for the market due to its significant investments in digital technologies. The European Council (EC) is focusing on making investments to improve cloud computing platform services that would increase the demand for EMM solutions in various European countries in the coming years. Italian manufacturers embrace digital trends, automating manufacturing processes to free up creative time for customer needs. They are adopting EMM solutions to optimize internal processes and enhance operational efficiency. For instance, in May 2020, Microsoft announced a USD 1.5 billion investment plan to increase digital transformation in Italy, including its first cloud datacenter region. This investment is dedicated to SMEs and would help Italy adopt EMM solutions for data security threats.

Changing economic and political conditions and the demand for EMM solutions offer increased visibility and transparency of data and its risks. These factors are expected to drive the growth of the EMM market in Switzerland. There is a surge in the adoption of cloud computing, social media, wireless connectivity, e-commerce, and big data across the Rest of Europe, which is expected to propel the demand for effective corporate, risk, and governance strategies.

10.4 ASIA PACIFIC

Asia Pacific (APAC) is witnessing an advanced and dynamic adoption of new technologies and is projected to record the highest CAGR of 18.0% during the forecast period in the EMM market. This rapid growth is because of its growing technology adoption rate. Many Asian countries are leveraging information-intensive big data technologies and IoT to uncover and close privacy gaps, prioritize remediation, and make informed decisions about third-party data sharing concerns of the public. Microsoft, SAP, and IBM account for the major share of the APAC EMM market, along with several other significant EMM solution providers. 42Gears Mobility Systems is one such company that offers user-focused EMM solutions and which has continued to record growth in the APAC region. The company has achieved a leading position in the EMM market due to its well-practiced strategy of expanding its customer base through acquisitions as well as partnerships with significant players in the market.

Several industries are investing in EMM solutions due to the expansion of online platforms in the APAC region. The BFSI vertical is investing significantly in EMM solutions to manage day-to-day transactions and operations. APAC constitutes major countries, including China, India, Japan, and the Rest of APAC. India is the fastest-growing country-level market in the region for EMM solutions due to the implementation of various government policies and investments in technology integration. Industry players such as IBM, Cisco, and Microsoft have a presence, and other players are also expected to enhance their investments and presence in the country.

Device and content management solutions have witnessed notable implementations in China due to the increasing digitalization and the enforcement of several regulatory compliances across the country. China does not have an omnibus data protection law. Instead, the country regulates privacy and cybersecurity issues through several industry-specific laws, including Commercial Banking Law, Postal Law, and the Provisions on the Protection of Personal Information of Telecom and Internet Users, which facilitate a higher adoption of metadata management solutions among enterprises. India, on the other hand, has witnessed increased adoption of these solutions due to the increasing digital transformation in the country to facilitate better decision-making among enterprises. Foreign Direct Investment (FDI) and Foreign Institutional Investor (FII) are key factors expected to directly impact the growth of the Indian sensitive data security market.

10.4.1 ASIA PACIFIC: EMM MARKET DRIVERS

- The rising wave of insurance data and personal data is calling for best-in-class device management measures in India. This will lead to the adoption of EMM solutions and services in the country.
- An increase in the adoption of AI and deep learning algorithms is contributing to the growth of the EMM market in India.
- Key companies operating in the APAC region are projected to benefit from the flexible economic conditions, industrialization- and globalization-motivated policies of the governments, as well as the expanding digitalization. These factors are expected to cause a high adoption of EMM solutions in the region.
- Companies in the APAC region are projected to adopt advanced AI and IoT solutions faster than the companies in the Rest of the World. The Chinese government is focusing on implementing a national plan to make China the global AI leader by 2030. This is projected to drive the growth of the EMM market in the country.
- Implementation of government policies and technological integration in Japan is projected to support the growth of the EMM market.
- There has been a significant increase in new and active users of food delivery apps in Asia, except India (as the country has witnessed a dip in the number of active users). Social media and entertainment apps have also seen significant growth in users.

- According to Digital Center 2020, by 2019, APAC is projected to have the highest business IP traffic in the world, reaching 11.4 exabytes per month and more than half of the world's Internet users. This has led to an increase in concerns for data security and privacy, which would further drive the adoption of EMM solutions and services across the APAC region.

10.4.2 ASIA PACIFIC: COVID-19 IMPACT

- India developed the Aarogya Setu App linked with the Sanyog application for collecting geotagged data that will help government agencies in making location-specific decisions while responding to the outbreak.
- As the COVID-19 pandemic progresses around the world, governments are relying on geospatial information, digital solutions, and AI-driven risk analytics to enhance community resilience. A new United Nations report highlights how space and geospatial information applications have played an important role in supporting monitoring, response, and preparation for the pandemic in the APAC region and in implementing sustainable development goals.
- In Japan, a tech startup, Bespoke, launched a chatbot called Bebot to provide the latest and reliable updates on the COVID-19 outbreak to travelers.
- The increase in demand for online network connectivity and online purchases of essential goods due to COVID-19 would drive the adoption of automation, connectivity intelligence, Robotic Process Automation (RPA), and IoT in India.

10.4.3 ASIA PACIFIC: REGULATIONS

10.4.3.1 Privacy Commissioner for Personal Data

The office of the Privacy Commissioner for Personal Data (PCPD) is the authority enforcing the Personal Data (Privacy) Ordinance (PDPO) in Hong Kong. In September 2017, the PCPD hosted the 39th International Conference of Data Protection and Privacy Commissioners, the annual gathering of data protection authorities worldwide.

The PCPD pursues an active agenda of public education and the publication of compliance guidance, including a strong focus on technology-related issues. The PCPD is also closely monitoring the implementation of the GDPR, stating that Hong Kong must consider the need to establish a comparable framework and mechanism interoperable with international data protection authorities without compromising economic and technological development.

10.4.3.2 Act on the Protection of Personal Information

Japan's Act on the Protection of Personal Information (APPI) dates to 2003 and so stands as one of Asia's oldest laws in this area. In the wake of a series of high-profile data security breaches and revelations of unlawful sales of personal data in Japan, the Japanese government passed extensive reforms to the APPI in September 2015. The following reforms were implemented in May 2017:

- The appointment of an independent, dedicated data protection regulatory authority
- The expansion of the definition of "personal data" to include biometric data
- The introduction of a concept of "special care required personal information" (i.e., the concept of sensitive personal data) that will be subject to enhanced protections
- The introduction of restrictions on cross-border transfers of personal data, which will now require: (i) data subject consent; (ii) export to a jurisdiction having the benefit of an adequacy finding; or (iii) satisfaction of other criteria to be specified by the new regulatory authority, including a certification under the APEC CBPR program

- The introduction of data anonymization regulations that will require organizations making use of anonymized personal data to publicly announce the items of data being anonymized and establish internal and external rules for managing “reidentification risk”: i.e., the risk that the data is processed in such a way as to enable the identification of anonymous data subjects

10.4.3.3 Critical Information Infrastructure

Singapore's Cybersecurity Bill was passed into law on 5 February 2018, providing a framework for the regulation of providers of Critical Information Infrastructure (CII). The Cyber Security Agency of Singapore will define CII on a sectoral basis. Owners of CII are required to take certain protective measures and comply with reporting requirements, and are ultimately responsible for the security of their CII. This will not extend to multinationals with Singapore offices that are supported by infrastructure located overseas.

10.4.3.4 International Organization for Standardization 27001

The International Organization for Standardization (ISO) 27001 compliance provides a risk-based framework of policies and procedures for establishing, implementing, operating, monitoring, reviewing, maintaining, and improving the Information Security Management System (ISMS). The procedures and policies include defining a security policy and the scope of ISMS, conducting risk assessments, managing identified risks, selecting control objectives and controls to be implemented, and preparing a statement of applicability. ISO 27001 guidelines cover various areas, such as access control, audit, incident response, and system and information integrity. The key 114 controls required as a part of ISO 27001 compliance are security policy, organization of information security, asset management, HR security, physical and environmental security, communications and operations management, access control, information security incident management, business continuity management, compliance, and information systems acquisition, development, and maintenance.

10.4.3.5 Personal Data Protection Act

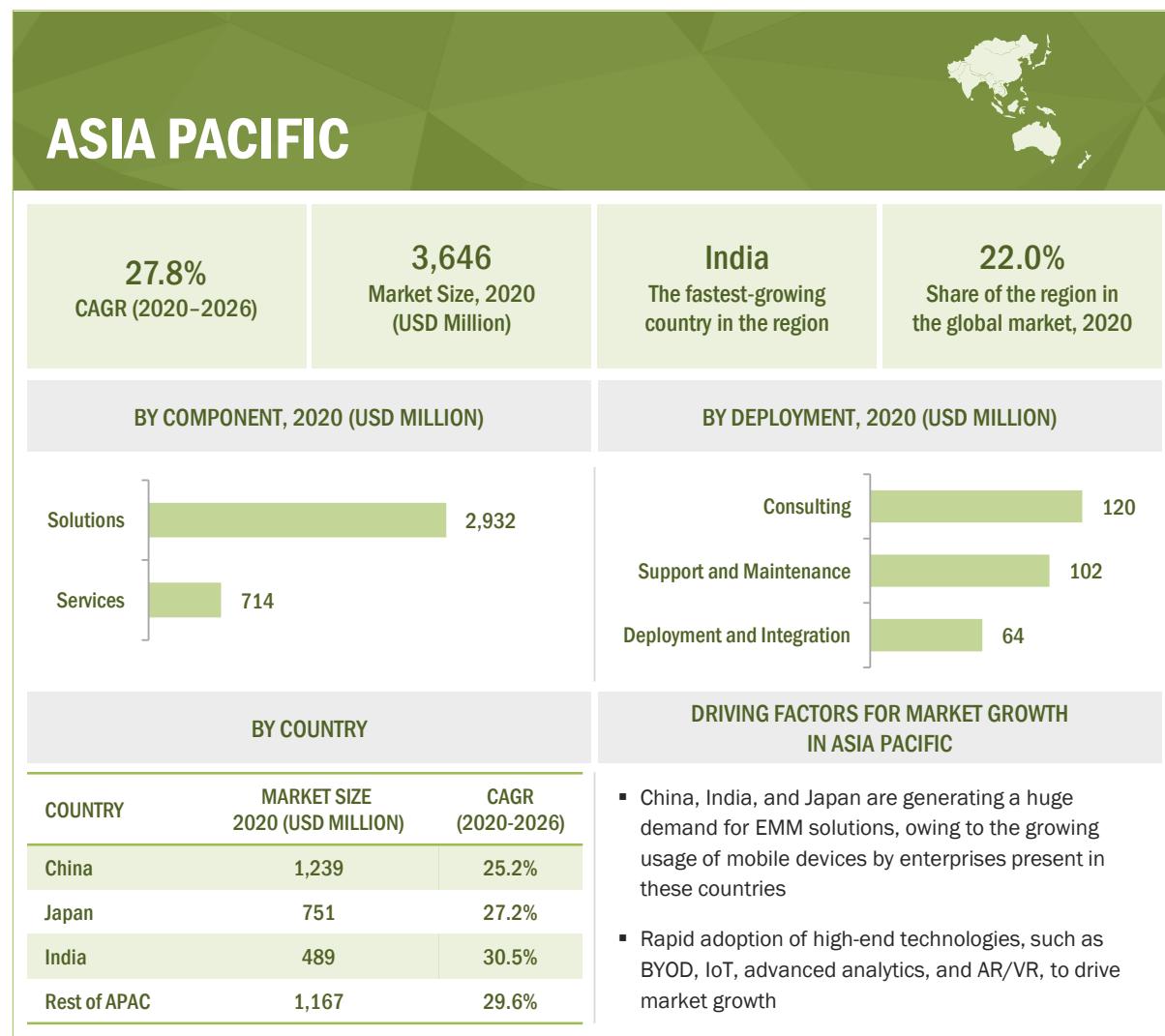
The Personal Data Protection Act (PDPA) establishes a data protection law that comprises various rules governing the collection, use, disclosure, and care of personal data in Singapore. It recognizes both the rights of individuals to protect their personal data, including rights of access and correction, and the need for organizations to collect, use, or disclose personal data for legitimate and reasonable purposes. The PDPA provides a national Do Not Call (DNC) registry for establishments. The DNC Registry allows individuals to register their Singapore telephone numbers to opt-out of receiving marketing phone calls, mobile text messages, such as Short Message Service (SMS) or Multimedia Messaging Service (MMS), and faxes from organizations.

The PDPA covers personal data stored in electronic and non-electronic forms. The data protection provisions in the PDPA (parts III to VI) generally do not apply to the following:

- Any individual acting on a personal or domestic basis
- Any employee acting in the course of his or her employment with an organization
- Any public agency or an organization in the course of acting on behalf of a public agency in relation to the collection, use, or disclosure of the personal data. Companies can refer to the Personal Data Protection (Statutory Bodies) Notification 2013 for the list of specified public agencies
- Business contact information: This refers to an individual's name, position name or title, business telephone number, business address, business electronic mail address or business fax number, and any other similar information about the individual, not provided by the individual solely for his/her purposes

These rules act as a baseline law operating as part of the law of Singapore. They do not supersede existing statutes, such as the Banking Act and Insurance Act, but work in conjunction with them and the common law.

FIGURE 45 ASIA PACIFIC: MARKET SNAPSHOT



Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 55 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2016–2019 (USD MILLION)

Component	2016	2017	2018	2019	CAGR (2016–2019)
Solutions	1,058	1,376	1,784	2,307	29.7%
Services	245	322	423	555	31.4%
Total	1,302	1,698	2,207	2,862	30.0%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 56 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2020–2026 (USD MILLION)

Component	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Solutions	2,932	3,733	4,760	6,076	7,768	9,903	12,600	27.5%
Services	714	920	1,188	1,536	1,988	2,566	3,305	29.1%
Total	3,646	4,653	5,948	7,612	9,756	12,469	15,905	27.8%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

By component, the solutions segment is estimated to account for a larger share of the APAC market in 2020. This segment's growth is attributed to the increase in demand for comprehensive EMM solutions that can enforce the required security measures to protect business-sensitive data on mobile devices and enable real-time decisions. The services segment is projected to record a higher CAGR during the forecast period due to the increased focus on faster and better problem resolution.

According to a research study, 79% of the enterprise executives believe that companies that do not leverage big data in the right way may witness a dip in their competitive position and could ultimately face extinction. 83% of these executives have pursued big data projects to gain a competitive edge. With the increasing need to remain competitive, companies started adopting EMM solutions to manage business data to drive maximum value from the metrics, insights, and information.

TABLE 57 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2016–2019 (USD MILLION)

Service	2016	2017	2018	2019	CAGR (2016–2019)
Managed Services	150	196	257	334	30.7%
Professional Services	95	126	167	220	32.4%
Total	245	322	423	555	31.4%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 58 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2020–2026 (USD MILLION)

Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Managed Services	428	549	705	907	1,168	1,499	1,921	28.4%
Professional Services	286	371	483	629	820	1,067	1,384	30.1%
Total	714	920	1,188	1,536	1,988	2,566	3,305	29.1%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

Based on services, the managed services segment is estimated to account for a larger market size in 2020. This growth is attributed to the provision of technical expertise, helping companies enhance their focus on core business processes. The professional services segment is projected to register a higher CAGR during the forecast period due to the segment's capabilities to plan and strategize operations through design, implementation, adoption, and training, which help companies to resolve business challenges such as cloud migration and product deployment.

TABLE 59 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2016–2019 (USD MILLION)

Professional Service	2016	2017	2018	2019	CAGR (2016–2019)
Consulting	41	54	71	93	31.6%
Support and Maintenance	33	44	58	78	33.6%
Deployment and Integration	21	28	37	49	32.1%
Total	95	126	167	220	32.4%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 60 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2020–2026 (USD MILLION)

Professional Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Consulting	120	155	201	260	337	436	562	29.3%
Support and Maintenance	102	133	175	230	302	396	518	31.2%
Deployment and Integration	64	82	107	139	181	234	303	29.7%
Total	286	371	483	629	820	1,067	1,384	30.1%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The consulting segment is projected to register the largest market in 2020 due to the increasing need to aid and train individuals to manage technologically advanced EMM solutions. The support and maintenance segment is estimated to account for the highest CAGR during the forecast period as companies need assistance in the deeper integration of EMM with their existing BI and data analytics tools.

TABLE 61 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2016–2019 (USD MILLION)

Organization Size	2016	2017	2018	2019	CAGR (2016–2019)
Large Enterprises	871	1,126	1,450	1,862	28.8%
SMEs	431	573	757	999	32.3%
Total	1,302	1,698	2,207	2,862	30.0%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 62 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2020–2026 (USD MILLION)

Organization Size	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Large Enterprises	2,351	2,972	3,764	4,771	6,057	7,666	9,683	26.6%
SMEs	1,295	1,681	2,184	2,841	3,700	4,803	6,222	29.9%
Total	3,646	4,653	5,948	7,612	9,756	12,469	15,905	27.8%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

In APAC, large enterprises have already started implementing EMM solutions and are keen to integrate advanced technologies to detect, monitor, and utilize data to avoid probable failures beforehand and avoid unexpected delays in operations. The high adoption of EMM solutions by SMEs across verticals, such as healthcare and life sciences, manufacturing, and retail, and their focus on leveraging real-time data to improve sensitive data records are projected to drive the demand for EMM solutions and services.

TABLE 63 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2016–2019 (USD MILLION)

Deployment Mode	2016	2017	2018	2019	CAGR (2016–2019)
On-premises	583	749	958	1,223	28.0%
Cloud	474	627	825	1,084	31.7%
Total	1,058	1,376	1,784	2,307	29.7%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 64 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2020–2026 (USD MILLION)

Deployment Mode	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
On-premises	1,534	1,926	2,422	3,049	3,843	4,829	6,055	25.7%
Cloud	1,398	1,807	2,337	3,027	3,925	5,074	6,544	29.3%
Total	2,932	3,733	4,760	6,076	7,768	9,903	12,600	27.5%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

The on-premises segment is estimated to account for a larger market size in 2020. This growth is due to the easy deployment and installation of on-premise solutions with enhanced security and analytical capabilities for generating real-time data. The cloud segment is projected to register a higher CAGR during the forecast period due to the rapid adoption of cloud-based solutions by various end-users across verticals, such as BFSI, retail, government, and healthcare and life sciences, to enable secure and flexible EMM.

TABLE 65 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2016–2019 (USD MILLION)

Solution	2016	2017	2018	2019	CAGR (2016–2019)
MDM	401	515	659	842	28.1%
MAM	354	458	591	761	29.0%
MCM	127	168	221	291	31.8%
Mobile Expense Management	96	128	169	224	32.5%
Identity and Access Management	80	107	143	189	33.5%
Total	1,058	1,376	1,784	2,307	29.7%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 66 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2020–2026 (USD MILLION)

Solution	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
MDM	1,057	1,329	1,673	2,108	2,660	3,347	4,202	25.9%
MAM	962	1,218	1,545	1,962	2,496	3,165	4,005	26.8%
MCM	376	486	629	815	1,057	1,368	1,765	29.4%
Mobile Expense Management	290	377	490	638	831	1,079	1,399	30.0%
Identity and Access Management	247	323	422	552	723	944	1,228	30.6%
Total	2,932	3,733	4,760	6,076	7,768	9,903	12,600	27.5%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

By solution, the MDM segment is estimated to account for the largest market size in APAC in 2020. This segment's growth can be attributed to the growing need for organizations to handle threats to their business in an integrated and cost-effective manner and to ensure the security of all employees within the organizations. The identity and access management segment is expected to register the highest CAGR during the forecast period due to the growing need for organizations to gain customer trust by operationalizing privacy policies and scaling compliance across multiple regulations.

TABLE 67 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2016–2019 (USD MILLION)

Vertical	2016	2017	2018	2019	CAGR (2016–2019)
BFSI	261	335	429	547	28.0%
Retail and E-commerce	207	270	349	451	29.5%
Healthcare and Life Sciences	223	287	369	472	28.4%
IT and Telecom	107	141	185	243	31.4%
Manufacturing	159	211	279	367	32.0%
Government	89	118	155	204	31.7%
Transportation and Logistics	72	95	126	165	31.6%
Travel and Hospitality	149	196	256	335	31.0%
Others*	34	45	59	78	32.0%
Total	1,302	1,698	2,207	2,862	30.0%

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 68 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2020–2026 (USD MILLION)

Vertical	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
BFSI	686	862	1,084	1,365	1,720	2,161	2,709	25.7%
Retail and E-commerce	572	727	926	1,181	1,507	1,919	2,438	27.3%
Healthcare and Life Sciences	594	748	944	1,192	1,507	1,900	2,390	26.1%
IT and Telecom	313	403	521	674	872	1,126	1,450	29.1%
Manufacturing	474	614	796	1,033	1,342	1,739	2,249	29.6%
Government	263	340	440	570	740	956	1,234	29.4%
Transportation and Logistics	213	275	355	460	596	771	994	29.3%
Travel and Hospitality	430	553	712	918	1,185	1,526	1,961	28.8%
Others*	101	131	170	220	286	370	479	29.6%
Total	3,646	4,653	5,948	7,612	9,756	12,469	15,905	27.8%

e: estimated; p: projected

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

By vertical, the BFSI segment is estimated to account for the largest market size in APAC in 2020. EMM solutions focus on gaining valuable insights, improving business performance, detecting fraud, fulfilling customer expectations, and saving costs at the end of the day, leading to their increased adoption in the BFSI vertical. The manufacturing segment is projected to register the highest CAGR during the forecast period owing to the rise in digital transformation initiatives by manufacturing organizations for improved employee outcomes.

TABLE 69 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2016–2019 (USD MILLION)

Country	2016	2017	2018	2019	CAGR (2016–2019)
China	478	611	780	992	27.6%
Japan	273	355	459	592	29.4%
India	159	212	282	375	33.1%
Rest of Asia Pacific*	392	520	686	903	32.0%
Total	1,302	1,698	2,207	2,862	30.0%

*Rest of APAC includes Malaysia, ANZ, Singapore, and South Korea.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 70 ASIA PACIFIC: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2020–2026 (USD MILLION)

Country	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
China	1,239	1,550	1,942	2,434	3,055	3,821	4,767	25.2%
Japan	751	954	1,213	1,545	1,971	2,506	3,181	27.2%
India	489	637	833	1,088	1,424	1,858	2,417	30.5%
Rest of APAC*	1,167	1,511	1,960	2,544	3,306	4,284	5,540	29.6%
Total	3,646	4,653	5,948	7,612	9,756	12,469	15,905	27.8%

e: estimated; p: projected

*Rest of APAC includes Malaysia, ANZ, Singapore, and South Korea.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

A sudden rise in the application of social media to study customer behavior patterns is a key factor contributing to the growth of the EMM market in China. These patterns enable businesses to make their strategies more effective. The increase in the amount of transactional data also acts as a key factor encouraging the adoption of EMM solutions in China. The digital world relies on data, and no one produces more of it than China's nearly 1.4 billion Internet users. The vast wealth of information these users emit has helped Chinese tech companies become one of the world's best, leading to speculations that China will inevitably dominate future technologies, such as AI. This would further drive the adoption of EMM solutions in China.

Companies in India are projected to grow due to the large-scale digitization in the country, resulting in the increased generation of data. Ericsson's Mobility Report for June 2020 stated that India's data traffic growth continued its upward trajectory and remains high with the increased usage of smartphones. This huge quantity of data demands efficient data discovery, preparation, and management. The Indian government has also launched multiple initiatives that focus on investing in emerging technologies, such as AI, IoT, and big data analytics, which involve EMM as a core component.

10.4.4 CHINA

China has witnessed an increase in technological investments in the APAC region. According to the World Bank Group report, China's Global Index ranking is projected to be the highest among developing countries. Since 2000, China's contribution to global GDP growth (in purchasing-power-parity terms) has been higher than that of the US, and the country accounted for over half of the combined contribution of India, Brazil, and Russia, the three next-largest emerging economies. The IT trends in China are gaining considerable traction. The amount of data created and analyzed every day in China is constantly increasing and creates growth opportunities for developers of EMM solutions and services. China is also home to various technology firms. Due to these factors, the investments in R&D activities that attract both domestic and international companies remain high. It is estimated that big data will generate significant financial value across sectors. For instance, major applications of personal location data can create a value of over USD 90.7 billion for service providers for ten years. This would encourage the adoption of EMM solutions across companies in China. However, the Chinese government has several rules for litigations, such as Cybersecurity Law, Chinese State Secrets Laws, and Chinese Counter-Terrorism Laws; several rules for litigations that impose possible regulations for collecting data. The country is increasingly expanding its business with foreign companies, which would ultimately lead to an increase in litigations and cross-border issues. To handle such situations efficiently, it would be necessary to discover and regulate sensitive data, and hence, EMM solutions are projected to gain traction in the coming years.

10.4.5 JAPAN

Japan is a highly developed economy and is well-known for its advancements in ML, AI, and other cutting-edge technologies that enhance the country's productivity and process optimization. To compete with global companies, Japanese organizations are adopting AI and ML technologies. The country has witnessed a rise in the adoption of cloud-based EMM solutions. In February 2020, the Japanese government agreed to seal a deal with AWS to help move HR systems and document management tools in the cloud environment by 2025. The government and the private sectors are making high investments in AI technologies to increase competitiveness in Japan. Several policies and funding programs are being implemented by government authorities.

The Japanese government has predicted that by 2025, the market for AI technologies in the country will reach USD 1.1 trillion. The country has witnessed a rise in the adoption of IoT and big data. The increase in R&D investments has also encouraged the growth of verticals such as telecommunications, IT, and education in the country. Japanese vendors have started adopting EMM solutions to improve their digital transformation.

Japan's move to modernize its data protection regime has occurred in parallel with its progress toward an Economic Partnership Agreement with the European Union, now concluded. In December 2017, the European Commission and Japan's Personal Information Protection Commission issued a joint press release indicating that good progress was being made toward a mutual finding of adequacy for data transfers.

10.4.6 INDIA

During the last decade, India has witnessed high adoption of big data and IoT solutions. Big data and analytics solutions have increased the support to new business models and operational effectiveness. A major shift has been witnessed in intelligent automation, AI, and ML, along with IoT technologies. Companies in the country are focusing on adopting EMM solutions. As enterprises are focusing on adopting EMM solutions to increase their profitability and improve customer engagement, they are focusing on collaborating with EMM service providers. The availability of a skilled workforce at reasonable costs, development of infrastructure, technological capabilities, and government support to harness the market opportunities have contributed to the growth of the EMM market in the country.

The government of India has introduced various policies and initiatives to leverage the benefits of these disruptive technologies in various sectors. Several startups in India are also using these technologies to create innovative business models. An increase in the adoption of smart city projects and the rise in IoT trends in India have resulted in a large amount of data flowing internally across organizations and outside the country. This has led to an increase in the number of advanced cyberattacks. Security vendors in the country are developing enhanced EMM solutions to help discover and protect sensitive information and prevent data breaches.

10.4.7 REST OF ASIA PACIFIC

The Rest of APAC includes countries such as Malaysia, Australia and New Zealand (ANZ), Singapore, and South Korea. The increase in data security threats in these countries has led to a rise in the spending on security solutions. Factors driving the demand for EMM solutions include the rise in BYOD trends and high dependency on the Internet for R&D activities. These have led to the generation of a high amount of data, which is exposed to countless cybersecurity threats. The Rest of APAC countries are taking initiatives to minimize security risks in public and private organizations by designing and implementing various policies and regulatory frameworks. To secure the generated data and comply with regulatory compliances, these countries are projected to adopt EMM solutions. Australian vendors are projected to invest in EMM solutions with the adoption of the cloud environment for businesses. In 2018–2019, the Australian government invested USD 125.2 million to ensure the delivery of high-quality essential services for IoT. It funds 44 service arrangements with Western Australian (WA) state government agencies, with a budget of USD 39 million in 2018–2019. An increase in the adoption of EMM technologies by SMEs and government agencies and a rise in the implementation of cloud services across ANZ are driving the growth of the EMM market in Australia and New Zealand. In May 2019, a bank in ANZ changed the way it derived insights from data to help its institutional customers make improved strategic business decisions by adopting Google Cloud data analytics capabilities. Such capabilities will help financial institutions to quickly generate meaningful data insights and help customers make informed business decisions on issues that include liquidity, risk, and cash management, or strategic calls that include store locations, inventory, and market positioning. The increase in government spending to drive the growth of businesses is a major factor driving the growth of the EMM market in South Korea.

10.5 MIDDLE EAST AND AFRICA

The Middle East and Africa (MEA) region is witnessing an increased adoption of EMM solutions and services. Countries considered for the market analysis of this region include the Kingdom of Saudi Arabia (KSA), the United Arab Emirates (UAE), South Africa, and the Rest of MEA (Israel, Qatar, Turkey, and Kuwait). The MEA region has witnessed significant growth in the adoption of analytics and related technologies. Middle Eastern countries are witnessing high adoption of technology solutions. To keep pace with global technological advancements, governments in this region are focusing on transforming into information and innovation-based societies. The government policies in the UAE form a base to attract a variety of businesses, and the country has the vision to be one of the most innovatively advanced countries by 2021. The EMM market in the MEA region is projected to witness fast growth due to the considerable implementation of EMM tools by vendors in the Middle East. The major attraction of this region is its potential for investments from various organizations in digitalization, which is significantly increasing in Africa.

Organizations in the Middle East are experiencing rapid developments and growing increasingly powerful economically. Along with this growth, organizations are focusing on digitalization for the mass population across the region that will entail implementing robust regulations and standards. Privacy is becoming even more important to consumers; therefore, EMM adoption will help organizations protect sensitive data from cyberattacks and understand compliance laws and criteria to meet industry regulations. The African region also witnesses growth in EMM solutions development. Major developments in this region are witnessed in the BFSI, retail, healthcare and life sciences, and manufacturing sectors due to the rise in income levels and rapid industrialization.

10.5.1 MIDDLE EAST AND AFRICA: EMM MARKET DRIVERS

- According to Start-Up Nation Finder, currently, there are nearly 200 active Industry 4.0 startups operating in Israel. This number is projected to double in the next five years, which will encourage the adoption of EMM solutions and services in Israel.
- Countries from the MEA are focusing on digitalization by implementing different programs, such as Saudi Arabia Vision 2030 and Abu Dhabi Economic Vision 2030. These initiatives are expected to drive the adoption of EMM solutions and services in the region.
- The MEA region includes a large number of oil and gas companies, which strictly need to maintain production efficiency with high security and secure transport. These companies are expected to adopt EMM solutions and services to comply with regulations.
- Developing countries such as the UAE and South Africa, which are the hotspots of trade and commerce, are expected to witness high adoption of EMM components in the coming years.
- With various government plans, such as Saudi Arabia's National Transformation Plan 2020, the UAE's National Agenda 2021, Qatar's National Development Strategy 2017–2022, and Kuwait's Kuwait Development Plan (KDP), the EMM market is projected to witness fast growth in the MEA region.
- South Africa is stepping up to implement the National Development Plan (NDP) and Vision for 2030 across the public and private sectors. Digital transformation (DX) has become a key component of these development efforts. This is projected to drive the growth of the EMM market.
- The increase in government support and digitalization and the adoption of technological advancements are the key factors projected to further drive the demand for EMM solutions across the UAE during the forecast period.

10.5.2 MIDDLE EAST AND AFRICA: COVID-19 IMPACT

- During the COVID-19 pandemic, healthcare providers and the public across Saudi Arabia have increasingly been investing in digital communication to replace face-to-face consultations and checkups.
- In the UAE's technology sector, Emirati Company Group 42 (G42) has planned to leverage the existing AI and cloud computing technologies to prevent the virus from spreading and ensure medical supplies reach the areas where they are most needed. Enterprises such as BFSI, government, and energy and utilities are expected to increase their cloud spending in the next two or three years to sustain critical business functions to counter post-COVID-19 scenarios.
- Oil exporters in Middle Eastern countries are significantly impacted by the plummeting oil prices because of travel restrictions due to the COVID-19 pandemic.
- The retail vertical is witnessing a significant demand in the KSA as there is a surge in the online purchase of food products during the COVID-19 pandemic.
- Oil exporters are facing several problems due to travel restrictions and bans. Hence, oil prices have fallen by over 50%. This has majorly impacted the economy of the Middle East.
- The UAE's Ministry of Economy has set up an interactive online tool to help companies address the impact of the COVID-19 pandemic, support business continuity, and promote sound business practices as part of an effort to shore up the private sector during the crisis.
- The governments in the Middle East use real-time monitoring applications to spot quarantine breaches and backtracking of metadata to figure out where people had been and whom did they contact.

10.5.3 MIDDLE EAST AND AFRICA: REGULATIONS

10.5.3.1 Israeli Privacy Protection Regulations (Data Security), 5777-2017

The Israeli Privacy Protection Regulations (Data Security), 5777-2017 entered into force concurrently with the EU GDPR in May 2018. The regulations significantly expanded the privacy protection obligations that apply to most companies operating in Israel. The regulations impose detailed information pertaining to security requirements upon any organization that is in possession of a database containing personal data, including data relating to employees, candidates for new positions, consumers, and other personal information.

10.5.3.2 Cloud Computing Framework

- The KSA Cloud Computing Regulatory Framework (CCF) is based on international best practices and governs the rights and obligations of CSPs, individual customers, government entities, and businesses.
- As per CCF's cloud security requirements, CSPs must adhere to cloud customer information that can be subject to different levels of information security, depending on the required level of preservation of the information's confidentiality, integrity, and availability.
- CCF classifies customer data into four security levels and contains several statutory presumptions about how customer information should be classified from an information security standpoint. The framework controls the use of big data by vendors across verticals and ensures data security and privacy.

10.5.3.3 GDPR Applicability in the Kingdom of Saudi Arabia (KSA)

- From May 2018, KSA companies that process the personal data of EU-based data subjects in the context of the activities of a European establishment, offer goods or services to, or monitor the behavior of EU-based data subjects must comply with the GDPR.
- Businesses in the KSA that fall within the scope of the GDPR must appoint an EU representative located in one of the European countries of individuals who are offered products or subject to behavioral monitoring. The representative acts on behalf of the companies in the KSA and may be addressed by any EU data protection supervisory authority and the data subject.
- The enforcement of the GDPR legislation leads to increased reliance on real-time analytics. Big data needs to be stored securely. The GDPR enables customers to remove their data from one vendor's database and switch it to another vendor, enabling improved customer control over the data.

10.5.3.4 Protection of Personal Information Act

- The Protection of Personal Information Act 4 of 2013 (POPIA) is the comprehensive data protection legislation enacted in South Africa. POPIA aims to give effect to the constitutional right to privacy while balancing this against competing rights and interests, particularly the right of access to information. The POPIA was signed into law on 19 November 2013.
- Essentially, the purpose of the POPIA is to protect people from harm by protecting their personal information, to stop their money from being stolen, stop their identity from being stolen, and generally protect their privacy, which is a fundamental human right.
- The legislation affects any natural or juristic person who processes personal information, including large corporations and government. The data protection laws of many other countries exempt SMEs, but not currently in South Africa.

TABLE 71 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2016–2019 (USD MILLION)

Component	2016	2017	2018	2019	CAGR (2016–2019)
Solutions	741	954	1,224	1,568	28.4%
Services	170	222	289	375	30.1%
Total	912	1,176	1,513	1,943	28.7%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 72 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2020–2026 (USD MILLION)

Component	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Solutions	1,974	2,491	3,149	3,986	5,054	6,393	8,072	26.5%
Services	478	611	782	1,003	1,287	1,648	2,107	28.0%
Total	2,453	3,102	3,931	4,988	6,341	8,041	10,179	26.8%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 73 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2016–2019 (USD MILLION)

Service	2016	2017	2018	2019	CAGR (2016–2019)
Professional Services	104	135	175	226	29.4%
Managed Services	66	87	114	149	31.1%
Total	170	222	289	375	30.1%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 74 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2020–2026 (USD MILLION)

Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Professional Services	287	365	465	593	757	965	1,227	27.4%
Managed Services	191	246	317	410	530	684	880	29.0%
Total	478	611	782	1,003	1,287	1,648	2,107	28.0%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 75 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2016–2019 (USD MILLION)

Professional Service	2016	2017	2018	2019	CAGR (2016–2019)
Consulting	29	37	48	63	30.2%
Support and Maintenance	23	30	40	52	32.2%
Deployment and Integration	15	20	26	33	30.9%
Total	66	87	114	149	31.1%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 76 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2020–2026 (USD MILLION)

Professional Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Consulting	80	103	132	169	217	278	355	28.1%
Support and Maintenance	68	88	115	150	195	254	330	30.1%
Deployment and Integration	43	55	71	91	118	152	196	28.8%
Total	191	246	317	410	530	684	880	29.0%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 77 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2016–2019 (USD MILLION)

Organization Size	2016	2017	2018	2019	CAGR (2016–2019)
Large Enterprises	619	792	1,010	1,285	27.6%
SMEs	293	385	504	658	31.0%
Total	912	1,176	1,513	1,943	28.7%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 78 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2020–2026 (USD MILLION)

Organization Size	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Large Enterprises	1,608	2,016	2,531	3,183	4,010	5,039	6,319	25.6%
SMEs	845	1,086	1,399	1,805	2,331	3,003	3,860	28.8%
Total	2,453	3,102	3,931	4,988	6,341	8,041	10,179	26.8%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 79 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2016–2019 (USD MILLION)

Deployment Mode	2016	2017	2018	2019	CAGR (2016–2019)
On-premises	416	529	670	847	26.7%
Cloud	325	425	554	721	30.4%
Total	741	954	1,224	1,568	28.4%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 80 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2020–2026 (USD MILLION)

Deployment Mode	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
On-premises	1,053	1,310	1,634	2,040	2,551	3,182	3,960	24.7%
Cloud	922	1,181	1,515	1,946	2,503	3,211	4,112	28.3%
Total	1,974	2,491	3,149	3,986	5,054	6,393	8,072	26.5%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 81 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2016–2019 (USD MILLION)

Solution	2016	2017	2018	2019	CAGR (2016–2019)
MDM	280	357	453	574	27.0%
MAM	248	318	407	519	28.0%
MCM	89	116	152	197	30.3%
Mobile Expense Management	68	89	116	152	31.0%
Identity and Access Management	57	74	97	126	30.5%
Total	741	954	1,224	1,568	28.4%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 82 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2020–2026 (USD MILLION)

Solution	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
MDM	715	892	1,115	1,396	1,750	2,188	2,730	25.0%
MAM	652	820	1,033	1,304	1,649	2,079	2,617	26.1%
MCM	252	322	412	529	680	872	1,116	28.2%
Mobile Expense Management	195	251	323	416	537	692	889	28.8%
Identity and Access Management	161	206	265	340	438	563	721	28.4%
Total	1,974	2,491	3,149	3,986	5,054	6,393	8,072	26.5%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 83 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2016–2019 (USD MILLION)

Vertical	2016	2017	2018	2019	CAGR (2016–2019)
BFSI	182	233	296	376	27.3%
Retail and E-commerce	145	186	239	305	28.1%
Healthcare and Life Sciences	156	199	253	320	27.1%
IT and Telecom	75	98	127	164	29.9%
Manufacturing	111	146	191	248	30.6%
Government	63	81	106	137	29.8%
Transportation and Logistics	51	66	86	112	30.5%
Travel and Hospitality	104	135	175	227	29.6%
Others*	25	32	42	54	29.6%
Total	912	1,176	1,513	1,943	28.7%

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 84 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2020–2026 (USD MILLION)

Vertical	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
BFSI	469	586	734	921	1,157	1,449	1,812	25.3%
Retail and E-commerce	383	483	609	769	973	1,229	1,548	26.2%
Healthcare and Life Sciences	399	498	623	780	978	1,224	1,528	25.1%
IT and Telecom	209	267	342	437	561	718	917	27.9%
Manufacturing	318	407	523	673	867	1,114	1,428	28.5%
Government	174	222	284	363	465	595	759	27.8%
Transportation and Logistics	144	184	237	304	392	503	645	28.4%
Travel and Hospitality	288	367	468	598	765	977	1,245	27.6%
Others*	68	87	111	142	182	232	296	27.7%
Total	2,453	3,102	3,931	4,988	6,341	8,041	10,179	26.8%

e: estimated; p: projected

*Others include education, media and entertainment, and energy and utilities

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 85 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2016–2019 (USD MILLION)

Country	2016	2017	2018	2019	CAGR (2016–2019)
Israel	221	281	357	452	26.9%
UAE	193	247	316	403	28.0%
South Africa	215	281	366	476	30.4%
Rest of MEA*	284	368	475	613	29.3%
Total	912	1,176	1,513	1,943	28.7%

*Rest of MEA includes Israel, Qatar, Turkey, Kuwait, and other countries in the region.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 86 MIDDLE EAST AND AFRICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2020–2026 (USD MILLION)

Country	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Israel	562	700	875	1,093	1,369	1,710	2,130	24.9%
UAE	506	637	802	1,012	1,278	1,611	2,028	26.0%
South Africa	608	778	998	1,282	1,650	2,117	2,712	28.3%
Rest of MEA*	777	987	1,256	1,601	2,044	2,603	3,309	27.3%
Total	2,453	3,102	3,931	4,988	6,341	8,041	10,179	26.8%

e: estimated; p: projected

*Rest of MEA includes Israel, Qatar, Turkey, Kuwait, and other countries in the region.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

10.5.4 KINGDOM OF SAUDI ARABIA

The Kingdom of Saudi Arabia (KSA) has witnessed a rise in digitalization and AI for the discovery of sensitive data over the past few years. The government in the country focuses on Future Investment Initiatives (FII), which would facilitate the growth of innovative technologies, such as ML, AI, and NLP. The country has encouraged investments in technology, which includes the creation of a massive technology-related fund with Japan's SoftBank Group. The KSA ranks seventh in household Internet access across the globe, with 36.2 million Internet users. Its mobile penetration rate is 12.5% of the total mobile connections in the region. The 4G adoption level is 39% in the KSA. The country follows the Basic Law of Governance, Electronic Transactions Law, and Credit Regulations. It has a large number of critical infrastructure projects, which can be dealt with easily using EMM solutions and services during litigations due to the easy data review and processing benefits these solutions offer. The KSA government introduced a plan named "Saudi Arabia 2023" with a vision to create a vibrant society, a thriving economy, and an ambitious nation that attracts its intrinsic strengths to help its citizens realize their aspirations. The KSA has a young demographic base, and this digital transformation is projected to help unlock the potential across sectors by utilizing young talent.

In November 2020, the KSA government invested USD 20 billion in AI projects, as the country seeks to diversify its economy amidst low crude prices. According to the World Bank, the country has invested in digital infrastructure to ease the burden of COVID-19 lockdown measures, ensure easy access to e-government services, and support its economic recovery. In March 2019, Zain Saudi Arabia (Zain KSA) and Nokia signed two important Memorandum of Understandings (MoUs) at the Mobile World Congress 2019 in Barcelona that will enable Zain KSA to quickly launch IoT services and applications, as well as provide innovative end-to-end solutions to enterprise and public-sector segments in the KSA. The collaboration will help Zain KSA further its digitalization initiatives to transform the country in line with the National Transformation Plan 2020 and Vision 2030.

10.5.5 UNITED ARAB EMIRATES

The United Arab Emirates (UAE) focuses on its Smart City Initiative 2021 in Dubai that aims to make the city among the best-connected places for future technological investments and digital transformation. The UAE government is exploring the potential of AI, ML, and blockchain technology to improve the efficiency of the IT industry. It is also believed to focus on building multiple smart cities and provide several online government services to its citizens. UAE laws are majorly founded upon civil law principles. The country also follows laws such as the general right to privacy for citizens under the UAE Constitution, the Regulatory Framework for Stored Values and Electronic Payment Systems (Digital Payment Regulation), and Dubai Data Law. These laws are expected to contribute to the adoption of EMM solutions and services. The UAE government has also undertaken various initiatives to achieve the Smart Dubai program besides focusing on expanding its smart city project to include smart economy, smart living, smart governance, smart environment, smart people, and smart ICT infrastructure. Companies are adopting EMM solutions to secure and protect the data flow from multiple data sources, such as IoT devices, and deliver timely insights.

The UAE has witnessed progression and cutting-edge advancements. The government in the country is focusing on adopting AI solutions, which are projected to play an important role in the nation's Centennial 2071 undertaking. The UAE's Cabinet has adopted another 'National Artificial Intelligence Strategy 2031,' due to which the UAE continues to be a worldwide leader in AI. The strategy would help in building an integrated framework that utilizes AI solutions in fundamental zones in the UAE. The strategy further incorporates a plan to construct a well-settled UAE brand of AI solutions through exercises that make the UAE a test platform for AI innovation, upgraded services, training, and qualification programs. Key companies are investing in the expansion of their businesses across the UAE. For instance, Alteryx, in June 2019, opened its MEA office in Dubai, which focuses on supporting local customers and partners to gain knowledge from the data by enabling data producers to analyze it for insights and make data-driven decisions.

10.5.6 SOUTH AFRICA

South Africa is projected to witness significant growth in the EMM market. The country has already begun using EMM solutions to generate improved data insights. The South African government is implementing the National Development Plan (NDP) and vision for 2030 across public and private sectors to improve the digital transformation of organizations. The NDP is considered as a blueprint document for South African vendors. The aim of the NDP is to eliminate poverty and reduce inequality by 2030 through the adoption of advanced technologies, such as AI, ML, social media, and the cloud, which will enhance citizen engagement and drive operational efficiencies.

Global industry players, such as IBM, Google, and Microsoft, have also made significant investments to conduct R&D activities for AI, analytics, and IoT in South Africa. Organizations are realizing the relevance of device and data protection and have started deploying EMM solutions to categorize sensitive information and secure data. The government is supporting data protection by taking initiatives to minimize cybercrimes in public and private organizations and launching various policies and regulatory frameworks. For instance, with an increase in data volume, data security has always been a concern for South Africa's Standard Bank. The need for a central store due to the increased volume of data has led the bank to adopt EMM tools.

10.5.7 REST OF MIDDLE EAST AND AFRICA

The Rest of MEA includes Qatar, Israel, Turkey, and Kuwait. African countries are lagging in terms of technology adoption due to the lack of infrastructure, capital, HR, and restrictive government policies. Nigeria and Kenya remain the center of technological innovations in the African region. The governments in Africa are taking initiatives to attract entrepreneurs, tech ventures, and innovation centers in the region.

Qatar is witnessing increased economic growth due to the adoption of e-government solutions. Healthcare and life sciences, BFSI, and government verticals are increasingly adopting EMM solutions in the country. Most banks and FinTech companies in the Rest of MEA are collaborating technology innovations to secure highly confidential customers and organizational and regulatory data. Some countries, such as Qatar and Bahrain, have introduced data protection laws, and the need to comply with these regulations is projected to drive the adoption of EMM solutions in these countries. Countries in this region are also exposed to cyberattacks due to inadequate security measures and external threats. Organizations and governments are slowly realizing the value of sensitive data protection and introducing mandates to secure data.

Israel and South Korea have also announced plans to cooperate with an economic forum in Seoul. The countries will pursue increased cooperation in areas such as vehicle equipment, renewable energy, and ICT, and they also agreed to expand the level of cooperation into innovative sectors, including biotechnology, AI and data science, and robotics. Established regulatory landscape, such as the implementation of GDPR and Israeli data protection law, is projected to encourage the adoption of EMM solutions in Israel.

10.6 LATIN AMERICA

Latin America includes Brazil, Mexico, and the Rest of Latin America. Brazil and Mexico offer growth opportunities for EMM vendors. The adoption of technological solutions is low in Latin America, but it is projected to increase in the coming years, primarily due to high investments by many organizations for the implementation of various EMM solutions. Companies in this region are investing in building and expanding big data analytics to help enhance the security and privacy of their data. They are investing in security laboratories to stay at par with other regions. Latin America is forming partnerships to open new data centers and offer technology-enabled solutions and services in the region. For instance, IBM expanded its global cloud footprint by launching the IBM Cloud Multizone Region (MZR) in late 2020. With this expansion, Brazil will be the first Latin American country to introduce cloud services that would help clients quickly deploy mission-critical workloads across the hybrid cloud environment. In February 2018, the Ministry of Health of Uruguay announced its plans to adopt big data and enable patients to compare

different healthcare providers through an easy-to-use web portal. Governments and legal entities are enforcing new laws and upgrading existing regulations to ensure regulatory compliance and meet industry standards. These laws would make it mandatory for organizations operating in Latin America to deploy EMM solutions to protect customer data and comply with regulations.

10.6.1 LATIN AMERICA: EMM MARKET DRIVERS

- The Fourth Industrial Revolution offers opportunities to strengthen Latin American economies and governments in terms of IIoT by using data and digital technologies to increase modernization.
- The constant rise in the number of cyberattacks, mainly due to the proliferated use of the Internet in the region, is projected to drive the adoption of EMM solutions and services.
- According to the World Bank, 43% of the population in Latin America is under the age of 25, and 80% of the population resides in cities. This offers a wide scope for using data in the future. The youth population in Latin America is poised to capitalize on the Fourth Industrial Revolution by using data to benefit and transform urban living.
- The increasing need of Brazilian companies to identify personal data and sensitive data for processing purposes is projected to drive the adoption of EMM solutions in Brazil.
- The number of SMEs is growing in Latin America. For instance, the number of SMEs in Brazil is increasing; currently, it has around 6.3 million SMEs. This is expected to increase the adoption of EMM solutions at a significant rate.
- The increasing focus of vendors in Latin America toward ensuring their data is being processed in accordance with defined legal bases of law is projected to drive the growth of the EMM market in the region.

10.6.2 LATIN AMERICA: COVID-19 IMPACT

- According to a recent survey conducted by the DNA Human Capital in Chile, Colombia, and Peru, more than two-thirds (nearly 68.7%) of business executives believe that COVID-19 would greatly affect the bottom-line of their companies.
- Latin America has also developed the potential to leverage big data and analytics for a better and healthy lifestyle. Though COVID-19 was slow to hit Latin America, the number of positive COVID-19 cases increased drastically between March 05 and March 25, 2020. According to Telcos, mobile access is a powerful tool that can support the entire region to control the spread of the virus. Telefonica Brasil, on April 02, 2020, promised to offer cellphone observations to analyze the quarantined population for slowing down the virus outbreak. The company also offers big data capabilities and management to aggregate network data, mobility data, cloud data processing centers, as well as digital assistance capabilities for public administration and health institutions.
- Cloud service providers, telecommunication companies, and MSPs would survive during the COVID-19 pandemic. However, their growth would be slow in the next quarter due to socio-political impacts, project delays, and supply chain disruptions. Due to the work-from-home policy, the demand for communication and collaboration solutions is on the rise. Various enterprises, such as IT, telecom, BFSI, education, and government, are incorporating cloud-based EMM tools to enhance data security and protect organizations' data from any threats or cyberattacks.

- E-commerce companies, such as MercadoLibre, are also witnessing challenges in their business operations. In response to the pandemic, quarantine policies, and high demand for necessities, the company announced fee waivers for its sellers of basic necessity products through the end of March. MercadoLibre reported a 114% and 403% increase in its pharmacy and home laundry sales in Mexico since the announcement.

10.6.3 LATIN AMERICA: REGULATIONS

10.6.3.1 Brazil Data Protection Law

- Brazil's data protection law, Lei Geral de Proteção de Dados (LGPD), came into force in August 2020. Before the LGPD, the data protection legislation in Brazil was sector-based and primarily regulated by the country's civil rights framework for the Internet (Internet Act) and Consumer Protection Code.
- The LGPD attempts to unify over 40 different statutes that currently govern personal data online and offline by replacing certain regulations and supplementing others.
- The LGPD imposes detailed rules for the collection, use, processing, and storage of personal data. This new regulation replaces more than 40 different regulations that deal with data protection. The final version of LGPD also introduced important revisions to the original version of the law, such as the creation of the National Data Protection Authority that will be responsible for overseeing and enforcing the LGPD.

10.6.3.2 Argentina Personal Data Protection Law No. 25.326

- Argentina was the first Latin American country to implement data protection laws and the first non-European country to be recognized by the EC to have adequate levels of data protection. The need to revisit the current legislation results from technological advancements and the changing international landscape with the introduction of the GDPR since the Argentinian Personal Data Protection Act 2000 came into force.
- Argentina's Personal Data Protection Law No. 25.326 has guided how data is processed and protected. For the past years, lawmakers have debated a replacement bill that would more closely align with GDPR. Among other mandates, it requires that employers obtain consent from individuals before data is collected. Notably, the new bill expressly permits and regulates background checks and provides individuals with the right to access and request the deletion of their personal data. The replacement bill will go before the Senate, where it has a high likelihood of passing. If the bill passes into law, organizations will have a two-year period to prepare before enforcement.
- Argentina's new draft data protection bill proposes further changes to bring the country's data protection law in line with the GDPR. The bill acknowledges the right to be forgotten and the right to data portability. Other changes include stricter provisions in the area of cross-border transfers to countries with inadequate levels of data protection, new legal bases for data processing other than data subject consent, including legitimate interests, and new definitions of biometric and genetic data.

TABLE 87 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2016–2019 (USD MILLION)**

Component	2016	2017	2018	2019	CAGR (2016–2019)
Solutions	582	742	945	1,200	27.3%
Services	134	174	224	288	28.9%
Total	716	916	1,169	1,488	27.6%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 88 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COMPONENT, 2020–2026 (USD MILLION)**

Component	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Solutions	1,498	1,875	2,351	2,953	3,716	4,665	5,847	25.5%
Services	365	462	587	746	951	1,208	1,533	27.0%
Total	1,863	2,337	2,938	3,699	4,667	5,873	7,380	25.8%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 89 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2016–2019 (USD MILLION)**

Service	2016	2017	2018	2019	CAGR (2016–2019)
Managed Services	82	106	136	174	28.3%
Professional Services	52	68	88	114	30.0%
Total	134	174	224	288	28.9%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 90 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SERVICE, 2020–2026 (USD MILLION)**

Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Managed Services	219	276	348	441	558	706	891	26.4%
Professional Services	146	186	238	305	392	502	642	28.0%
Total	365	462	587	746	951	1,208	1,533	27.0%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 91 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2016-2019 (USD MILLION)**

Professional Service	2016	2017	2018	2019	CAGR (2016-2019)
Consulting	22	29	38	49	29.3%
Support and Maintenance	18	24	31	40	31.1%
Deployment and Integration	12	15	20	26	29.5%
Total	52	68	88	114	30.0%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 92 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY PROFESSIONAL SERVICE, 2020-2026 (USD MILLION)**

Professional Service	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020-2026)
Consulting	62	78	99	127	162	206	262	27.3%
Support and Maintenance	52	67	86	112	144	186	240	29.1%
Deployment and Integration	32	41	53	67	86	110	140	27.5%
Total	146	186	238	305	392	502	642	28.0%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 93 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2016-2019 (USD MILLION)**

Organization Size	2016	2017	2018	2019	CAGR (2016-2019)
Large Enterprises	486	617	780	984	26.5%
SMEs	230	300	389	504	29.8%
Total	716	916	1,169	1,488	27.6%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 94 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY ORGANIZATION SIZE, 2020–2026 (USD MILLION)**

Organization Size	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Large Enterprises	1,221	1,519	1,893	2,363	2,954	3,684	4,587	24.7%
SMEs	641	818	1,045	1,336	1,713	2,189	2,792	27.8%
Total	1,863	2,337	2,938	3,699	4,667	5,873	7,380	25.8%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 95 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2016–2019 (USD MILLION)**

Deployment Mode	2016	2017	2018	2019	CAGR (2016–2019)
On-premises	327	412	517	648	25.7%
Cloud	255	331	428	552	29.3%
Total	582	742	945	1,200	27.3%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 96 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY DEPLOYMENT MODE, 2020–2026 (USD MILLION)**

Deployment Mode	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
On-premises	799	986	1,220	1,512	1,876	2,322	2,869	23.8%
Cloud	699	888	1,131	1,441	1,840	2,343	2,978	27.3%
Total	1,498	1,875	2,351	2,953	3,716	4,665	5,847	25.5%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 97 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2016–2019 (USD MILLION)**

Solution	2016	2017	2018	2019	CAGR (2016–2019)
MDM	220	278	349	439	25.9%
MAM	195	247	314	397	26.9%
MCM	70	91	117	151	29.3%
Mobile Expense Management	53	69	90	116	29.9%
Identity and Access Management	44	58	75	97	29.7%
Total	582	742	945	1,200	27.3%

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 98 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY SOLUTION, 2020–2026 (USD MILLION)**

Solution	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
MDM	542	670	830	1,030	1,281	1,588	1,966	24.0%
MAM	494	616	770	964	1,210	1,513	1,890	25.1%
MCM	191	243	309	394	503	641	814	27.3%
Mobile Expense Management	148	189	241	309	395	505	644	27.8%
Identity and Access Management	123	157	200	255	327	418	532	27.7%
Total	1,498	1,875	2,351	2,953	3,716	4,665	5,847	25.5%

e: estimated; p: projected

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 99 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2016–2019 (USD MILLION)**

Vertical	2016	2017	2018	2019	CAGR (2016–2019)
BFSI	143	181	229	288	26.2%
Retail and E-commerce	114	145	185	234	27.1%
Healthcare and Life Sciences	123	155	195	246	26.1%
IT and Telecom	59	76	98	125	28.7%
Manufacturing	88	114	147	190	29.3%
Government	49	63	81	104	28.5%
Transportation and Logistics	40	51	67	86	29.4%
Travel and Hospitality	82	105	135	174	28.5%
Others*	19	25	32	42	29.0%
Total	716	916	1,169	1,488	27.6%

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 100 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY VERTICAL, 2020–2026 (USD MILLION)**

Vertical	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
BFSI	356	442	549	683	851	1,058	1,314	24.3%
Retail and E-commerce	292	365	457	573	720	903	1,130	25.3%
Healthcare and Life Sciences	304	376	467	581	724	899	1,115	24.2%
IT and Telecom	158	200	254	322	409	519	658	26.8%
Manufacturing	240	306	389	496	634	808	1,028	27.4%
Government	131	166	210	267	339	429	543	26.7%
Transportation and Logistics	109	139	177	226	288	368	468	27.5%
Travel and Hospitality	219	276	350	444	563	714	903	26.6%
Others*	53	67	85	108	138	175	222	27.1%
Total	1,863	2,337	2,938	3,699	4,667	5,873	7,380	25.8%

e: estimated; p: projected

*Others include education, media and entertainment, and energy and utilities.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 101 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2016–2019 (USD MILLION)**

Country	2016	2017	2018	2019	CAGR (2016–2019)
Brazil	310	392	494	621	26.0%
Mexico	220	282	361	460	27.8%
Rest of Latin America*	186	242	314	407	29.8%
Total	716	916	1,169	1,488	27.6%

*Rest of Latin America includes Argentina, Colombia, Peru, Chile, and other countries.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

TABLE 102 **LATIN AMERICA: ENTERPRISE MOBILITY MANAGEMENT MARKET SIZE, BY COUNTRY, 2020–2026 (USD MILLION)**

Country	2020-e	2021-p	2022-p	2023-p	2024-p	2025-p	2026-p	CAGR (2020–2026)
Brazil	768	952	1,181	1,468	1,827	2,269	2,813	24.2%
Mexico	577	725	914	1,153	1,457	1,837	2,313	26.0%
Rest of Latin America*	517	660	843	1,079	1,382	1,767	2,254	27.8%
Total	1,863	2,337	2,938	3,699	4,667	5,873	7,380	25.8%

e: estimated; p: projected

*Rest of Latin America includes Argentina, Colombia, Peru, Chile, and other countries.

Note: Numbers are rounded off to the nearest integer, which may result in rounding-off errors.

Source: Secondary Research, Expert Interviews, and MarketsandMarkets Analysis

10.6.4 BRAZIL

Brazil is one of the major countries responsible for shaping up the technological landscape of Latin America. The Brazilian government is making investments to boost data-driven technologies that will help vendors in the country to tackle fraudulence in the national social security system. Brazil is a service-oriented economy, and companies in the country are inclined toward the adoption of cloud-based services to reduce costs and lower the burden on their IT infrastructure. This is an opportunity for vendors providing cloud-based EMM solutions and services in this country. The increasing industrial production business, stable currency, and increasing business opportunities are leading to rising crime rates, litigations, and government investigations, which, in turn, lead to the adoption of EMM solutions in the country.

In February 2019, Contxto, a Brazilian digital media startup, partnered with SAS Institute Brazil. SAS Institute Brazil will launch a new service named Agile AX, which would create innovative centers to help startups improve employee skills, improve infrastructure, and obtain tools to execute projects with the use of ML and IoT technologies. The World Economic Forum, in partnership with the Ministry of Economy of Brazil and the Brazilian State of Sao Paulo, has developed a Policy Protocol to help policymakers deliver on a more inclusive Fourth Industrial Revolution. For instance, in June 2019, Brazil introduced the National IoT Plan initiative to bring together the Ministry of Science, Technology, Innovation and Communications (MCTIC), the Ministry of Economy, and the National Bank for Economic and Social Development (BNDES) with civil society, companies, academia, and other agencies to ensure that Brazil benefits from IoT technology.

10.6.5 MEXICO

Mexico is one of the key adopters of EMM solutions in Latin America. According to the Organisation for Economic Co-operation and Development (OECD), the government of Mexico, in 2018, introduced a policy to accelerate the digital transformation of public sectors. The policy includes the provision of digital and user-driven public services that leverage data and emerging technologies to enhance public trust, social inclusion, and well-being. Mexico has been witnessing increased investments in AI technology to automate repetitive tasks. The country's economy witnesses significant growth and has moved into an open and diverse economy over the past ten years. The stable economic growth indicates that the Mexican economy still has a high potential and would continue to grow dynamically in the future. The Mexican State in the Northwest of Mexico is witnessing continuous economic growth and contributes over 8% to the country's GDP (equivalent to 10% of industrial GDP). In May 2019, Inteligencia Mexico Conference (IMC) announced a trade show, which focused on discussions about topics related to analytics, AI, ML, and IoT, which would help businesses to improve their performance.

According to Mexico's Census Bureau, INEGI, there are 65 million Internet users, resulting in large amounts of data flow over the Internet. The revised Commercial Code in Mexico includes regulations and guidance for the protection of electronic data. The country has witnessed developments in its national privacy and electronic laws. Mexico is also affected by cross-border issues. EMM solutions enable the country to identify sensitive data and deal with cross-border legal processes and data breaches. To protect sensitive information, Mexican organizations are looking forward to deploying EMM solutions.

10.6.6 REST OF LATIN AMERICA

The Rest of Latin America includes Argentina, Colombia, Peru, and Chile. The EMM market in these countries is being driven by technological advancements. The market in the Rest of Latin America has witnessed significant growth in the recent past due to the adoption of new technologies by various verticals, such as the government, telecommunications and IT, and retail. In recent years, the government of Argentina attempted to attract investors with a legislation that supports startups and technology firms. This resulted in a rise in firms utilizing AI, ML, and robotics. The government also uses various methods to drive the growth of the technological industry. Large Argentinian corporations have begun utilizing advanced technologies to improve the efficiency of solutions and reduce employment costs. Since the past decade, Chile has been growing economically—it has advanced its legal system, issued free trade policy, started accepting FDI, and moved toward a democratic form of government. The country has also introduced new tax laws. These factors have contributed to the growth of businesses in the country, resulting in a large amount of data flow within and outside the country. The need to abide by regulatory data security compliances is one of the key factors projected to drive the growth of the EMM solutions market in Chile.

11 COMPETITIVE LANDSCAPE

11.1 OVERVIEW

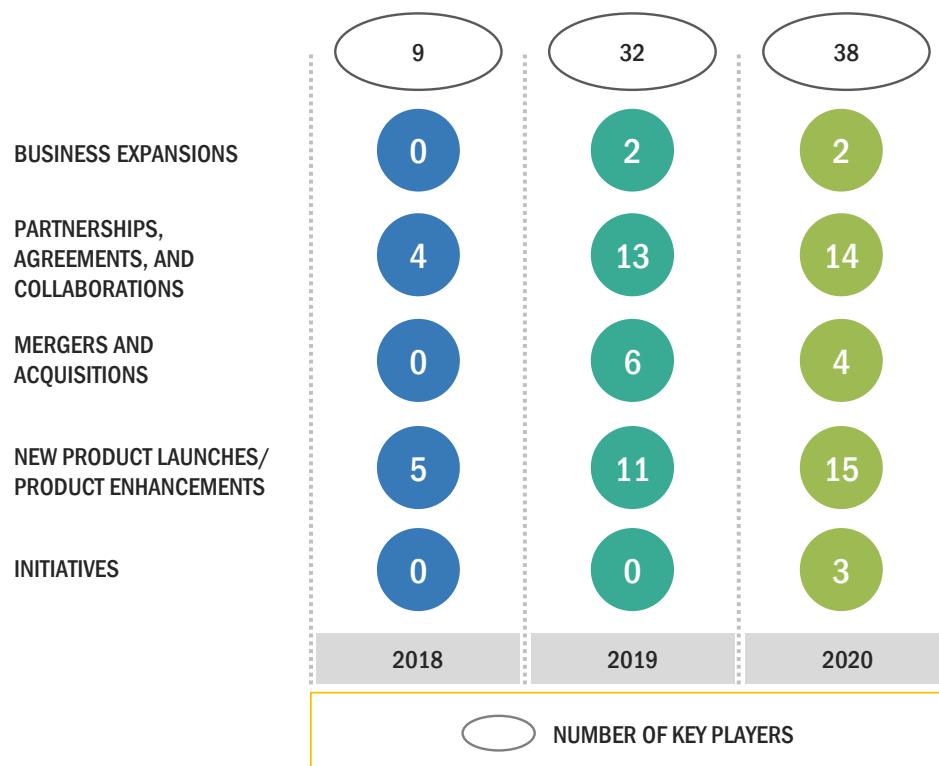
The competitive landscape analyzes growth strategies implemented by various major players in the EMM market across the globe. This section includes the market evaluation framework, revenue analysis, and market ranking of vendors operating in the market. It also highlights strategies undertaken by these vendors to expand their market shares and increase their EMM technology offerings in the market. The EMM market is consolidated in terms of the existing number of market players.

11.2 MARKET EVALUATION FRAMEWORK

Since all the markets follow a predictable life cycle, understanding the present stage of the market after analyzing the market dynamics in the last three to five years has become essential in predicting growth patterns. This analysis involves assessing the consolidation in the market by identifying the number of market players who account for over 50%-60% of the market share, number of expansions, including capacity addition in the existing production facilities and setting up greenfield facilities, new product launches, M&As, and strategic alliances and collaborations.

MarketsandMarkets' market evaluation framework provided below captures the key data from 2018 to 2021 for the EMM market.

FIGURE 46 MARKET EVALUATION FRAMEWORK



Note: 'Number of key players' refers to those players who cumulatively account for roughly 70% of the market.

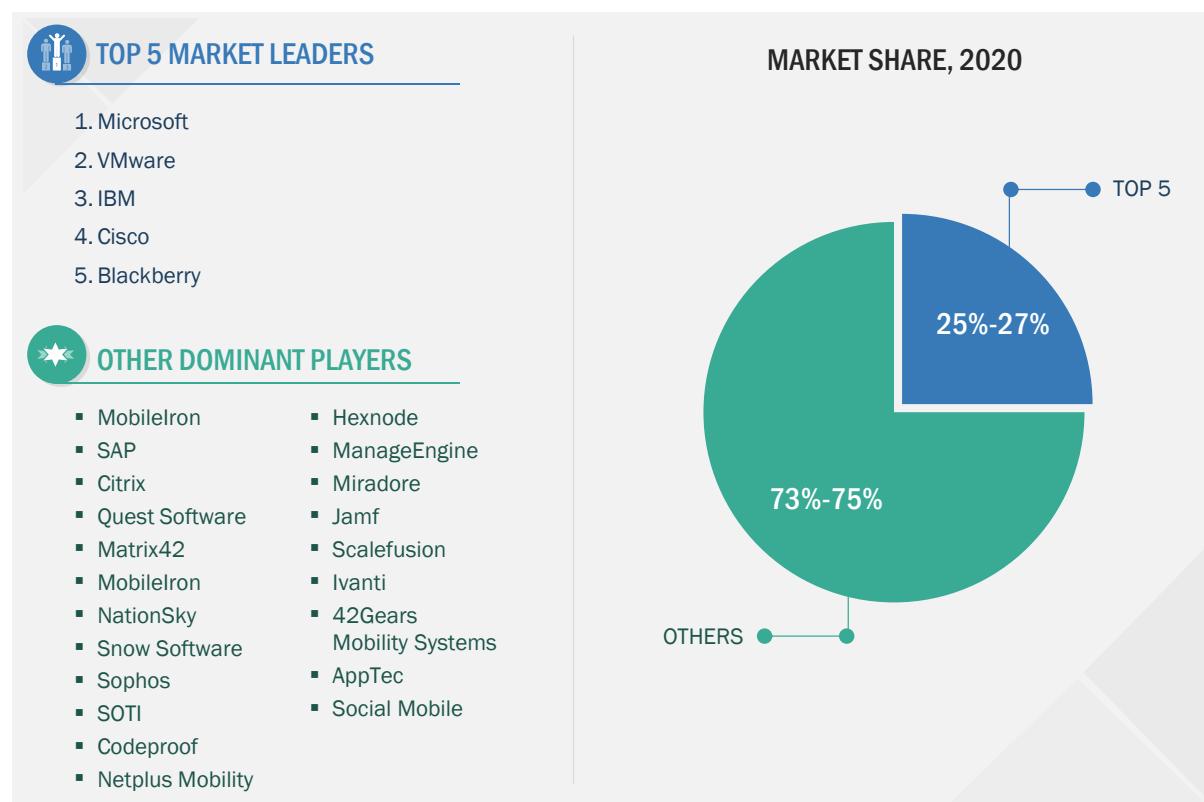
The number of partnerships, collaborations, and agreements has witnessed a rise over the years. EMM solution and service providers have been undertaking partnerships and collaborations to provide advanced technologies for carrying out meaningful business insights from data silos. A few companies have been undertaking innovations, and the market has witnessed a rise in new product launches and enhancements over the past three years. Mergers and acquisitions have remained constant over the years.

11.3 MARKET SHARE, 2020

Key players such as BlackBerry, IBM, Microsoft, MobileIron, and VMware AirWatch dominated the EMM market due to advantages of high-end technology solutions. Other dominant players in the market include Cisco, SAP, Citrix, Quest Software, Matrix42, MobileIron, NationSky, Snow Software, Sophos, SOTI, VMware AirWatch, Codeproof, NetPlus Mobility, 42Gears Mobility Systems, ManageEngine, Miradore, Jamf, and many more.

Companies are ranked based on various parameters, including depth and breadth of product offerings, regional reach, segmental revenue, and organic and inorganic growth strategies (contracts and agreements, new product launches, product upgradations, investments and expansions, M&As, and partnerships and collaborations), pertaining to the EMM market.

FIGURE 47 MICROSOFT TO LEAD THE EMM MARKET IN 2020



Note: The ranking and share of companies are estimated based on respective companies' strength of product portfolio and business strategy excellence. Secondary research and in-depth primary interviews conducted with key industry leaders have contributed to this analysis.

Source: Annual Reports, Press Releases, Investor Presentations, Primary Interviews, and MarketsandMarkets Analysis

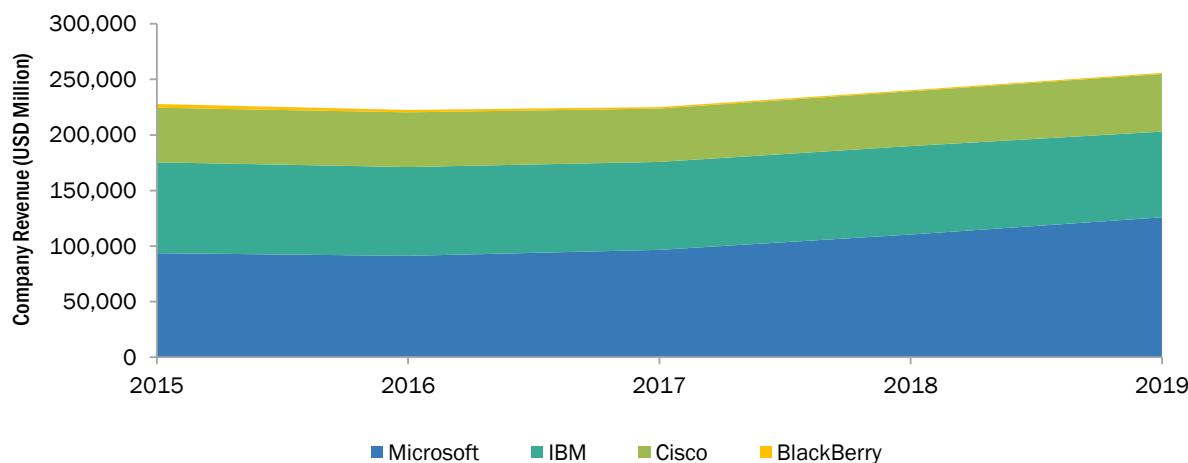
11.4 HISTORICAL REVENUE ANALYSIS OF KEY MARKET PLAYERS

Key players in the EMM market were identified through secondary research, and their market shares, in terms of value, were taken from their annual reports, presentations, and secondary research sources. Primary research interviews were conducted with key opinion leaders in the industry, such as CEOs, directors, industry experts, and other executives, to validate revenue and market share.

The size of the EMM market, in terms of value (USD million), based on components (solutions and services), deployment modes, organization size, verticals, and regions, was derived using prediction techniques based on demand and production trends. EMM solution prices were verified through primary sources and secondary research.

The first step in the preparation of this report was to define the approach and methodology to estimate the market size. This was followed by primary interviews and feature mapping on a regional basis from MarketsandMarkets' repository. The bottom-up approach was followed to derive the market size in terms of value. The market size was validated by in-depth interviews with industry experts, excerpts of which are available in the discussion guide section of the appendix chapter, and secondary research.

FIGURE 48 REVENUE ANALYSIS OF KEY MARKET PLAYERS



Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis

The figure above illustrates the total revenue of some key players in the EMM market. In the past three years, major developments have been made by these players in the market. Other leading players include Cisco, SAP, Citrix, Quest Software, Matrix42, MobileIron, NationSky, Snow Software, Sophos, SOTI, VMware AirWatch, Codeproof, NetPlus Mobility, 42Gears Mobility Systems, ManageEngine, Miradore, and Jamf. Key developments adopted by companies to stay competitive include mergers or acquisitions, new solution launches, solution enhancements, and partnerships with other players. These developments enable companies to expand their assets, increase their incomes, and grow their market presence.

11.5 RANKING OF KEY MARKET PLAYERS IN ENTERPRISE MOBILITY MANAGEMENT MARKET, 2020

FIGURE 49 RANKING OF KEY PLAYERS, 2020



Note: The ranking is estimated based on the companies' breadth of offerings, features/functions, delivery, support, reach, channel, viability, roadmap, and inorganic growth strategies in the EMM market. Secondary research, along with in-depth primary interviews conducted with key industry leaders, has contributed to this analysis.

Source: Annual Reports, Press Releases, Expert Interviews, and MarketsandMarkets Analysis

11.6 COMPANY PRODUCT FOOTPRINT ANALYSIS

TABLE 103 COMPANY PRODUCT FOOTPRINT

COMPANY	INDUSTRY FOOTPRINT	REGION FOOTPRINT	COMPANY FOOTPRINT
IBM	3.6	4.00	2.6
BlackBerry	3.4	4.00	2.5
Microsoft	4.0	4.00	2.7
Cisco	4.0	4.00	2.7
SAP	3.2	4.00	2.4
Citrix	3.0	2.40	1.8
Quest Software	2.5	2.40	1.6
Matrix42	2.2	3.20	1.8
MobileIron	3.0	3.20	2.1
NationSky	2.8	0.80	1.2
Snow Software	3.0	3.20	2.1
Sophos	2.2	2.40	1.5
SOTI	2.0	3.20	1.7
VMware	3.7	4.00	2.6
Codeproof	2.2	0.80	1.0

Netplus Mobility	2.1	0.80	1.0
42Gears Mobility Systems	2.5	2.40	1.6
ManageEngine	2.3	0.80	1.0
Miradore	2.3	0.80	1.0
Jamf	2.7	2.40	1.7

11.7 COMPETITIVE SCENARIO

The competitive scenario includes recent developments of major players operating in the EMM market. The market size analysis of key industry players is done based on various parameters, including the number of EMM stakeholders, depth of product offerings, and revenue generated.

11.7.1 NEW PRODUCT LAUNCHES AND PRODUCT ENHANCEMENTS

Companies have adopted the strategy of new product launches and product enhancements to enhance their product portfolios and meet the growing demand in the EMM market across the globe. Leading companies, such as IBM, ManageEngine, Hexnode, BlackBerry, Miradore, Microsoft, Codeproof, Cisco, SOTI, Sophos have adopted this strategy.

TABLE 104 NEW PRODUCT LAUNCHES AND PRODUCT ENHANCEMENTS, 2018-2021

DATE	COMPANY NAME	PRODUCT TYPE	PRODUCT NAME	DESCRIPTION
Dec-20	Cisco	Integrated	Webex Solution	Cisco announced the launch of the new Webex solution to deliver highly personalized insights and actionable recommendations to individuals and teams
Nov-20	BlackBerry	Integrated	UEM Software Suite	BlackBerry balanced the productivity and security needs with its updated UEM Software Suite
Oct-20	Codeproof	Integrated	MDM	Codeproof launched Remote Worker MDM for Laptops, Desktops, and PCs, an MDM solution for IT administrators to secure, deploy, and manage Windows endpoints for a modern workforce
Sep-20	ManageEngine	Integrated	ADSelfService Plus	ManageEngine announced that ADSelfService Plus now supports multi-factor authentication (MFA) for VPNs to protect organizations' internal networks from unauthorized access
Aug-20	Miradore	Integrated	-	Miradore released FileVault disk encryption for macOS devices
Jul-20	Hexnode	Integrated	Affiliate program	Hexnode announced the launch of its commission-based affiliate program to increase UEM adoption across multiple industries and extend the reach of Hexnode products

May-20	BlackBerry	Integrated	BlackBerry Spark Suites	BlackBerry launched BlackBerry Spark Suites, which include the BlackBerry Spark UEM Express Suite, BlackBerry Spark UEM Suite, BlackBerry Spark UES Suite, and BlackBerry Spark Suite.
May-20	Hexnode	Integrated	Identity and Access Management solution	Hexnode announced incorporating new integration with Okta, a popular cloud-based Identity and Access Management solution
Mar-20	Cisco	Integrated	Cloud-driven solution	Cisco expands a simple and secure portfolio with the launch of cloud-driven solutions. The launch of the product would enable small businesses to focus on their core activities by bringing together the power of ML, AI, and cloud-driven solutions, and make buying, installation, and maintenance simple.
Mar-20	IBM	Integrated	FileNet Content Manager	IBM updated the Long-Term Support Release (LTSR) information for FileNet Content Manager V5.5.4, Datacap V9.1.7, and IBM Content Navigator V3.0.7.
Mar-20	IBM	Integrated	Mobile App	IBM Automation Mobile Capture introduced a mobile app for intelligent document capture
Mar-20	Microsoft	Integrated	Microsoft EMM	To improve virtual meetings and bring consultations online. Microsoft added new features and capabilities designed to help businesses moving during COVID-19 and beyond.
Feb-20	BlackBerry	Integrated	BlackBerry Spark Suites	BlackBerry delivered a zero-trust security architecture through its BlackBerry Spark platform. This platform, with a new Unified Endpoint Security (UES) layer, can work with BlackBerry UEM
Feb-20	Miradore	Integrated	UEM Solution	Miradore extended software distribution capabilities of the UEM solution
Jan-20	Sophos	Integrated	Sophos Intercept X	Sophos introduced Sophos Intercept X for Mobile with new security capabilities
Dec-19	ManageEngine	Integrated	ADSelfService Plus	ManageEngine announced that ADSelfService Plus offers Endpoint Multi-factor Authentication (MFA) for Linux logins
Nov-19	Miradore	Integrated	Miradore UEM	Miradore is able to scan and install all missing security patches on Windows devices
Oct-19	SOTI	Integrated	SOTI ONE Platform	The company has updated its SOTI ONE Platform and the launched SOTI Insight, SOTI Connect, and SOTI Identity to deliver more value for customers
Aug-19	VMware	Integrated	Workspace ONE Platform	VMware unveiled innovations across its industry-leading Workspace ONE Platform
May-19	Microsoft	Integrated	Microsoft 265	New capabilities in Microsoft 365

May-19	Microsoft	Integrated	SharePoint	Innovations in SharePoint and across Microsoft 365
Apr-19	MobileIron	Integrated		MobileIron added new capabilities to improve its workforce productivity by strengthening access to corporate applications and services
Feb-19	Sophos	Integrated	Microsoft Intune	Sophos Mobile Security solution integrated with Microsoft Intune
Feb-19	IBM	Integrated	IBM Cloud Integration Platform	IBM launched hybrid cloud offerings to assist businesses in migrating, integrating, and managing applications in both the cloud and on-premise environments.
Feb-19	Miradore	Integrated	UEM	Miradore is carrying out the company's mission of providing seamless UEM to its customers
Dec-18	IBM	Integrated	LP18-0639	IBM Latin America software announcement LP18-0639. IBM FileNet Content Manager and IBM Business Automation Workflow are delivering a new charge metric, along with added capabilities for Filenet Content Manager, IBM Content Navigator, and IBM Datacap.
Dec-18	IBM	Integrated	Business Automation Workflow on cloud	IBM launched new business automation workflow on cloud express and Enterprise editions to deliver business process and case management capabilities in a single offering
Nov-18	Hexnode	Integrated	G Suite	Hexnode integrates with G Suite for efficient device enrollment. The solution is designed to help enterprises to keep track of data usage and manage it efficiently.
Feb-18	ManageEngine	Integrated	Patch Manager Plus	ManageEngine announced that it is strengthening its endpoint management offering by bringing Patch Manager Plus to the cloud
Jan-18	Hexnode	Integrated	Mobile Expense Management	Hexnode MDM announced the release of its newest solution for Mobile Expense Management

Source: Press Releases

11.7.2 BUSINESS EXPANSIONS

Leading market players have adopted the strategy of business expansions to increase their customer base. Microsoft, SOTI, and ManageEngine have adopted this strategy to increase their prominence in the market.

TABLE 105 BUSINESS EXPANSIONS, 2019-2020

DATE	COMPANY NAME	DESCRIPTION
February 2020	Microsoft	Microsoft, in partnership with Telefónica, announced the opening of a new data center region in Spain. Together, the two companies will help their mutual customers leverage the cloud to more quickly, securely, and easily innovate and scale their operations to create new business opportunities and improve competitiveness.
February 2020	SOTI	SOTI increased its investments in ANZ and grew the local workforce by more than 50%. The company has experienced a strong demand within the ANZ retail sector as mobility, and the number of IoT endpoints within the retail sector has increased.
November 2019	ManageEngine	ManageEngine announced that its cloud-based IT management applications are being hosted in two Australian data centers recently launched by its parent company, ZOHO. Organizations in Australia and New Zealand have access to ManageEngine solutions provided entirely from ISO 27001-certified, SOC 1 Type II, SOC 2 Type II, and PCI-DSS compliant data centers in Melbourne and Sydney.
October 2019	SOTI	SOTI solutions, such as SOTI MobiControl and SOTI Assist, are available on Microsoft Azure. The company expanded its relationship with Microsoft, thereby bringing the comprehensive capabilities of Microsoft Azure to SOTI customers.

Source: Press Releases

11.7.3 MERGERS AND ACQUISITIONS

Leading players have adopted the strategy of M&A to maximize their customer base and enhance their technology capabilities. Key players such as Blackberry, VMware, SAP, Cisco, Matrix42, MobileIron, and Miradore have adopted this strategy.

TABLE 106 MERGERS AND ACQUISITIONS, 2018-2020

DATE	DEAL	COMPANY 1	COMPANY 2	DESCRIPTION
May 2020	Acquisition	Cisco	ThousandEyes	Cisco completes the acquisition of ThousandEyes. Cisco strengthened its network and application performance with ThousandEyes' visibility into the Internet.
October 2019	Acquisition	Cisco	CloudCherry	Cisco completes the acquisition of CloudCherry, a CEM company based in Salt Lake City, Utah. CloudCherry provides customer journey mapping, out-of-the-box integrations, and predictive analytics. Predictive analytics would help contact center agents make real-time journey modifications, such as up and cross-selling, discounts, and service modifications, to meet customer needs and improve loyalty.

July 2019	Acquisition	Cisco	Acacia	Cisco signed an agreement to acquire Acacia, headquartered in Massachusetts, US. Cisco agreed to acquire Acacia for USD 70 per share in cash or for approximately USD 2.6 billion on a fully diluted basis, net of cash, and marketable securities.
February 2019	Acquisition	BlackBerry	Cylance	BlackBerry acquired Cylance, a privately-held AI and cybersecurity company based in Irvine, California. The company added Cylance's technology to its arsenal of cybersecurity solutions to help enterprises intelligently connect, protect, and build secure endpoints.
October 2019	Acquisition	VMware	Carbon Black	VMware acquired Carbon Black, a leading next-generation security cloud provider. With this acquisition, VMware provided a highly differentiated, intrinsic security cloud that protected enterprise workloads and clients through big data, behavioral analytics, and AI.
February 2019	Acquisition	VMware	Aetherpal	VMware acquired Aetherpal, a provider of remote support solutions. AetherPal's Remote Support solution capabilities were added to VMware Workspace ONE through Workspace ONE Advanced Remote Management.
January 2019	Acquisition	SAP	Qualtrics	SAP acquired Qualtrics International Inc. The acquisition accelerated the new XM category by combining Qualtrics' experience data with operational data from SAP software to power the economy.
January 2021	Acquisition	Matrix42	FastViewer	Matrix42 acquired FastViewer GmbH, a leading provider of remote access, remote support, and collaboration solutions, to better support customers in the prevailing remote working trend. The long-term partner of Matrix42 is already integrated into Matrix42 products with its remote access and remote support platform for PCs, laptops, mobile devices, servers, and cloud workloads, making it the perfect addition to the existing portfolio.
April 2020	Acquisition	MobileIron	incapptic Connect	MobileIron acquired incapptic Connect, a leader in mobile automation app release software. This acquisition helped MobileIron to accelerate the mobile app release journey for enterprise customers. Together, MobileIron and incapptic Connect made it easy to develop, publish, and update secure mobile apps.
October 2020	Acquisition	Standout Capital	Miradore	Standout Capital acquired Miradore for an undisclosed amount. Standout Capital is a Stockholm-based private equity firm investing in growing Nordic tech companies.

11.7.4 PARTNERSHIPS, AGREEMENTS, CONTRACTS, AND COLLABORATIONS

Vendors have opted for the partnerships, agreements, and collaborations strategy to increase their revenue in the EMM market. Companies that have incorporated this strategy include IBM, Microsoft, Cisco, BlackBerry, Citrix, Codeproof, SOTI, MobileIron, Matrix42.

TABLE 107 PARTNERSHIPS, AGREEMENTS, CONTRACTS, AND COLLABORATIONS, 2018-2021

DATE	DEAL TYPE	COMPANY 1	COMPANY 2	DESCRIPTION
Nov-18	Partnership	IBM	ServiceNow	IBM announced a partnership with ServiceNow to ease IT resources management for enterprises across cloud environments.
December 2020	Agreement	Cisco	IMImobile	Cisco announced an agreement to acquire IMImobile. Both companies have reached an agreement on the terms of a recommended cash offer pursuant to which Cisco will pay 595 pence per share in exchange for each share of IMImobile, or an aggregate purchase price of approximately USD 730 million assuming fully diluted shares, net of cash, and including debt.
June 2020	Collaboration	BlackBerry	Bell Technologies	BlackBerry partnered with Bell Technologies to provide enhanced secure communications for businesses and government customers via its mobile threat defense solution called BlackBerry Protect, thereby strengthening their longstanding relationship with Canadian and business customers.
July 2020	Partnership	Citrix	Microsoft	Citrix and Microsoft joined hands to reimagine new flexible workplaces during the COVID-19 pandemic situation
June 2020	Partnership	Microsoft	SAS	Microsoft partnered with SAS to bring cloud-based SAS industry solutions to its customers. The partnership aimed to provide advanced solutions to diagnose, treat, and prevent the disease, augmenting existing research efforts that primarily focus on the biology of the virus. This data will be made freely available to any researcher, public health official, or organization worldwide via an open data access portal.
June 2020	Partnership	Microsoft	Adaptive Biotechnologies	Microsoft partnered with Adaptive Biotechnologies to launch the ImmuneCODE database to share a population-wide immune response of the COVID-19 virus
May 2020	Collaboration	Microsoft	UnitedHealth Group	Microsoft collaborated with UnitedHealth Group to launch the ProtectWell protocol and application to support return-to-workplace planning and COVID-19 symptom screening
March 2020	Partnership	Microsoft	Adaptive Biotechnologies	Microsoft partnered with Adaptive Biotechnologies to help during the COVID-19 pandemic

April 2019	Partnership	Microsoft	Dell Technologies	Dell Technologies partnered with Microsoft. The partnership aims to address a wider range of customer needs and helps accelerate digital transformations.
May 2020	Partnership	Matrix42	SVA System Vertrieb Alexander GmbH	Matrix42 entered into a partnership with SVA System Vertrieb Alexander GmbH. This partnership is another milestone for Matrix42 toward an even stronger market penetration in the German-speaking region and to becoming the international market leader in the field of digital workspace management.
June 2020	Agreement	MobileIron	Magen David Adom (MDA)	Magen David Adom (MDA) implemented MobileIron's UEM platform. MDA, Israel's national EMS organization, leveraged UEM to secure devices, apps, and data used by emergency medical technicians and paramedics on the front lines of Israel's fight against coronavirus. The platform has also helped to improve the overall workforce efficiency.
April 2020	Partnership	MobileIron	Adeya	MobileIron partnered with Adeya, a privately-owned cybersecurity technology company. By combining their products, the two companies have helped many remote workers during the COVID-19 pandemic with end-to-end encrypted real-time voice and video calls, conference calls, SMS, instant messages, group chats, and file exchanges on any device.
April 2020	Partnership	MobileIron	Teamwire	MobileIron partnered with Teamwire to help organizations deliver fast, easy, and secure enterprise messaging across their entire mobile infrastructure, thereby helping customers to work more productively and securely, particularly during the COVID-19 pandemic.
July 2019	Collaboration	MobileIron	Microsoft	MobileIron extended the Microsoft integration with support for Microsoft Intune device compliance services
May 2020	Partnership	Codeproof	T-Mobile	Codeproof announced that it is now a T-Mobile Sell With partner. Codeproof will be listed and promoted internally to T-Mobile's sales managers to be resold to clients as a value-added service.
April 2020	Partnership	SOTI	TMT First	SOTI partnered with TMT First by joining the Lifelines4LovedOnes' initiative to help patients affected with COVID-19 stay connected
Dec-19	Partnership	IBM	Vodafone	Vodafone Idea partnered with IBM to launch a Secure Device Manager. Vodafone Idea Business Services (VIBS), the enterprise arm of Vodafone Idea, launched Vodafone Secure Device Manager (VSDM), powered by IBM Security MaaS360, and Unified Endpoint Management (UEM).

Nov-19	Partnership	IBM	VMware	IBM announced a partnership with VMware to speed up innovation and adoption of hybrid cloud across organizations.
Jun-19	Partnership	IBM	Cloudera	IBM partnered with Cloudera to enable organizations to use advanced data and AI solutions on the Apache Hadoop ecosystem.
Feb-19	Partnership	IBM	Zimperium	Zimperium and IBM MaaS360 with Watson combined to deliver complete mobile security, with comprehensive threat protection for mobile devices throughout the enterprise
Jan-19	Partnership	IBM	Juniper Networks	IBM Services announced an agreement of USD 325 million with Juniper Networks. The infrastructure, applications, and IT services of Juniper Networks will be assisted by IBM that will reduce their costs and enhance the journey of Juniper Networks to the cloud.
November 2019	Partnership	SOTI	Fraport AG	Fraport AG partnered with SOTI to use the SOTI ONE Platform for managing mobile devices across businesses
Oct-19	Partnership	SOTI	Delivery Hero	Delivery Hero, a global online food delivery leader, partnered with SOTI. SOTI One Platform helped Delivery Hero to deliver over one million meals every day.
June 2019	Partnership	Codeproof	Wireless Business Consultants (WBC)	Codeproof announced a strategic business collaboration with Wireless Business Consultants (WBC), a Sprint Telecommunications Master Agent
February 19	Partnership	SOTI	Airbus	Airbus partnered with SOTI to leverage its company's flagship EMM product and SOTI MobiControl
January 19	Partnership	SOTI	Google	SOTI built a partnership with Google to become a part of Google's Android Enterprise Recommended program
December 2018	Partnership	MobileIron	Montagu Evans	Montagu Evans partnered with MobileIron to securely manage data on mobile devices
August 2018	Collaboration	Citrix	Samsung	Citrix Systems and Samsung collaborated to provide a secure and easy-to-use digital workspace solution across Samsung devices
June 2018	Partnership	Miradore	Hutchison Drei Austria	Miradore entered into an alliance with Hutchison Drei Austria, a mobile communications provider for consumers and businesses, to implement MDM/EMM

Source: Press Releases

11.8 COMPANY EVALUATION MATRIX DEFINITIONS AND METHODOLOGY

The company evaluation matrix provides information on major players operating in the EMM market. The key focus of companies is mainly on EMM solutions. It outlines the findings and analysis of how well each market vendor performs in the predefined company evaluation matrix criteria. Vendor evaluations are based on two broad categories: strength of product portfolio and business strategy excellence. Each category carries various criteria, based on which vendors are evaluated. The evaluation criteria considered under the strength of product portfolio include the breadth and depth of product offerings, product features and functionalities, product differentiations, as well as the impact on customer value. The evaluation criteria considered under the business strategy excellence includes the geographic footprint, breadth of applications served, channel strategy and fit, viability, and effectiveness of organic growth strategies. Vendors are placed into one of the four categories: star, emerging leaders, pervasive, and participants, based on their performance in each criterion. The top 20 companies are evaluated in this evaluation matrix. These companies include Cisco, SAP, Citrix, Quest Software, Matrix42, MobileIron, NationSky, Snow Software, Sophos, SOTI, VMware AirWatch, Codeproof, NetPlus Mobility, 42Gears Mobility Systems, ManageEngine, Miradore, and Jamf.

11.8.1 STAR

Vendors who fall into this category receive high scores for most of the evaluation criteria. They have a strong and established product portfolio, and enhanced market presence. They provide mature and reputable EMM solutions and services. They have also adopted strong business strategies, such as product launches, partnerships, and acquisitions. Microsoft, IBM, Citrix, Cisco, VMware, BlackBerry, and MobileIron are placed in this category.

11.8.2 EMERGING LEADERS

Emerging leaders are vendors who have demonstrated substantial product innovations as compared to their competitors. They have a focused product portfolio pertaining to the product or the market. However, they do not have a strong growth strategy for their overall business. Quest Software, ManageEngine, Sophos, Matrix42, and Miradore are the emerging leaders.

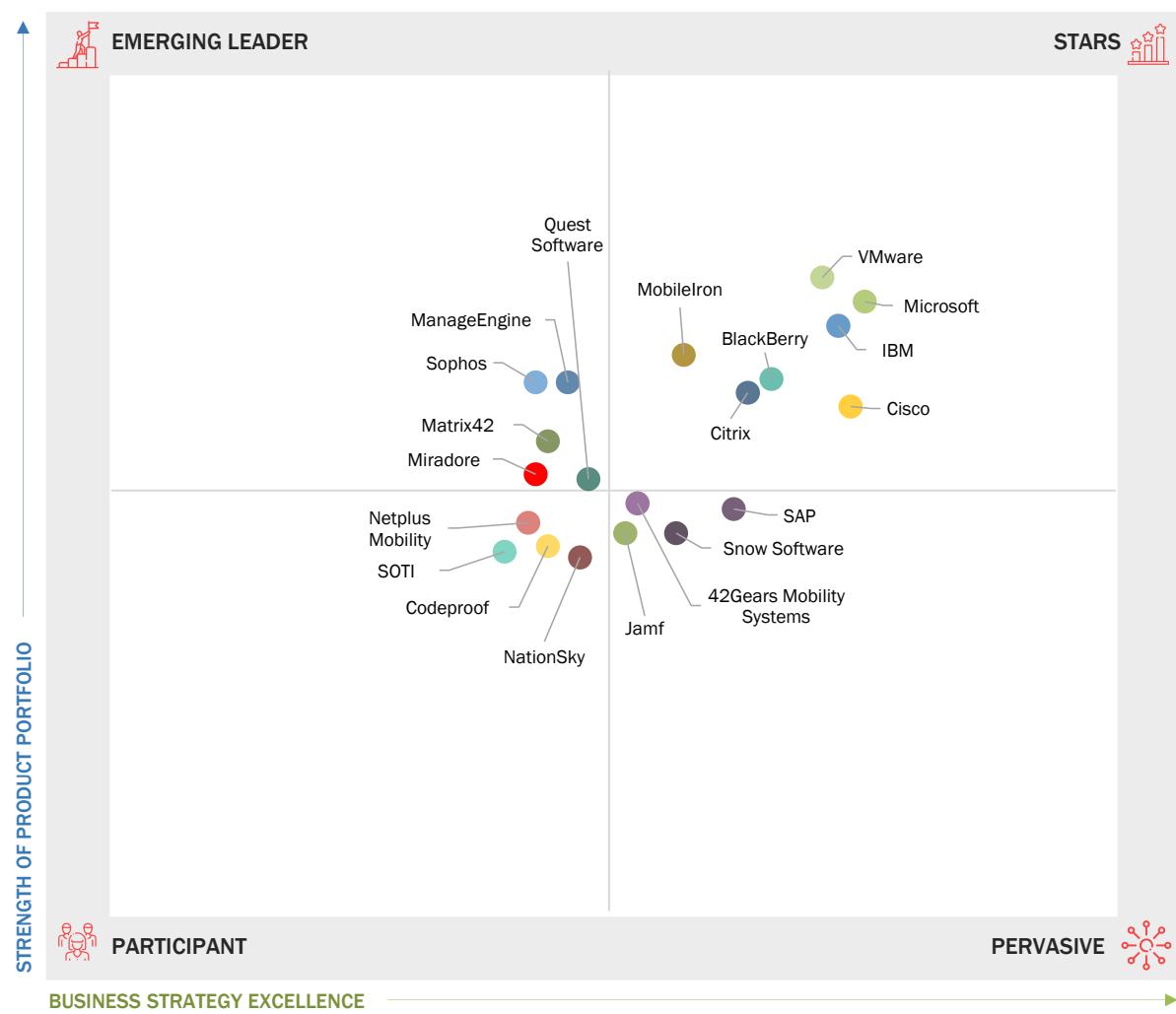
11.8.3 PERVERSIVE

Pervasive players are established vendors with strong business strategies. However, they score low in terms of product portfolios. They focus on a specific technology related to the product. SAP, Snow Software, Jamf, and 42Gears Mobility Systems are vendors in this category.

11.8.4 PARTICIPANTS

These are vendors with niche product offerings. They are starting to gain their position in the market. They do not have strong business strategies as compared to other established vendors. They might be new entrants in the market and require some time before gaining significant traction. Vendors who fall under this category are SOTI, Codeproof, NationSky, and NetPlus Mobility.

**FIGURE 50 ENTERPRISE MOBILITY MANAGEMENT MARKET (GLOBAL),
COMPANY EVALUATION MATRIX, 2020**



Source: Press Releases, Expert Interviews, and MarketsandMarkets Analysis

11.8.5 STRENGTH OF PRODUCT PORTFOLIO (GLOBAL)

FIGURE 51 PRODUCT PORTFOLIO ANALYSIS OF TOP PLAYERS IN THE EMM MARKET

Company	Breadth and Depth of Product Offering	Product Features and Functionality	Product Differentiation and Impact on Customer Value
IBM	●●●●	●●●●	●●●●
BlackBerry	●●●●	●●●●	●●●●
Microsoft	●●●●	●●●●	●●●●
Cisco	●●●●	●●●●	●●●●
SAP	●●●●	●●●●	●●●●
Citrix	●●●●	●●●●	●●●●
Quest Software	●●●●	●●●●	●●●●
Matrix42	●●●●	●●●●	●●●●
MobileIron	●●●●	●●●●	●●●●
NationSky	●●●●	●●●●	●●●●
Snow Software	●●●●	●●●●	●●●●
Sophos	●●●●	●●●●	●●●●
SOTI	●●●●	●●●●	●●●●
VMware	●●●●	●●●●	●●●●
Codeproof	●●●●	●●●●	●●●●
Netplus Mobility	●●●●	●●●●	●●●●
42Gears Mobility Systems	●●●●	●●●●	●●●●
ManageEngine	●●●●	●●●●	●●●●
Miradore	●●●●	●●●●	●●●●
Jamf	●●●●	●●●●	●●●●
RATING : ●●●● EXCELLENT ●●●● GOOD ●●●● AVERAGE ●●●● BELOW AVERAGE ●●●● NOT APPLICABLE			

Source: Press Releases, Expert Interviews, and MarketsandMarkets Analysis

11.8.6 BUSINESS STRATEGY EXCELLENCE (GLOBAL)

FIGURE 52 BUSINESS STRATEGY EXCELLENCE OF TOP PLAYERS IN THE EMM MARKET

Company	Geographic Footprint	Breadth of Applications	Inorganic (M&A, JV, Partnerships)	Organic (NPD, Expansions)
IBM	●●●●	●●●●	●●●●	●●●●
BlackBerry	●●●●	●●●●	●●●●	●●●●
Microsoft	●●●●	●●●●	●●●●	●●●●
Cisco	●●●●	●●●●	●●●●	●●●●
SAP	●●●●●	●●●●●	●●●●●	●●●●●
Citrix	●●●●	●●●●	●●●●	●●●●
Quest Software	●●●●●	●●●●●	●●●●●	●●●●●
Matrix42	●●●●●	●●●●●	●●●●●	●●●●●
MobileIron	●●●●	●●●●	●●●●	●●●●
NationSky	●●●●●	●●●●●	●●●●●	●●●●●
Snow Software	●●●●●	●●●●●	●●●●●	●●●●●
Sophos	●●●●●	●●●●●	●●●●●	●●●●●
SOTI	●●●●●	●●●●●	●●●●●	●●●●●
VMware	●●●●	●●●●	●●●●	●●●●
Codeproof	●●●●●	●●●●●	●●●●●	●●●●●
Netplus Mobility	●●●●●	●●●●●	●●●●●	●●●●●
42Gears Mobility Systems	⌚●●●●	●●●●●	●●●●●	●●●●●
ManageEngine	●●●●	●●●●●	●●●●●	●●●●●
Miradore	●●●●●	●●●●●	●●●●●	●●●●●
Jamf	●●●●●	●●●●●	●●●●●	●●●●●

RATING : ●●●● EXCELLENT ●●●●● GOOD ●●●●● AVERAGE ●●●●● BELOW AVERAGE ●●●●● NOT APPLICABLE

Source: Press Releases, Expert Interviews, and MarketsandMarkets Analysis

11.9 STARTUP/SME EVALUATION MATRIX, 2020

The startup/SME evaluation matrix provides information about major players offering EMM solutions, and outlines findings and analysis of how well each market vendor performs in the pre-defined startup/SME evaluation matrix criteria. Startups/SMEs selected for mapping were founded in or after 2015 and have received maximum C series funding. Vendor evaluations are based on two broad categories: strength of product portfolio and business strategy excellence. Each category carries various criteria, based on which vendors are evaluated. The evaluation criteria considered under the strength of product portfolio include the breadth and depth of product offerings, product features and functionality, and product differentiation and impact on customer value. The evaluation criteria considered under the business strategy excellence include vision alignment, funding, effectiveness of organic and inorganic growth strategies, channel strategy and fit, and geographical footprint.

11.9.1 PROGRESSIVE COMPANIES

AppTec and Scalefusion are progressive companies in the EMM market. The company has performed exceedingly well in both product excellence and business excellence parameters. It has a substantial partner ecosystem and well-developed marketing channels and received extensive funding to develop its product portfolio. It has been instrumental in achieving growth prospects, thereby attaining high partner attractiveness.

11.9.2 RESPONSIVE COMPANIES

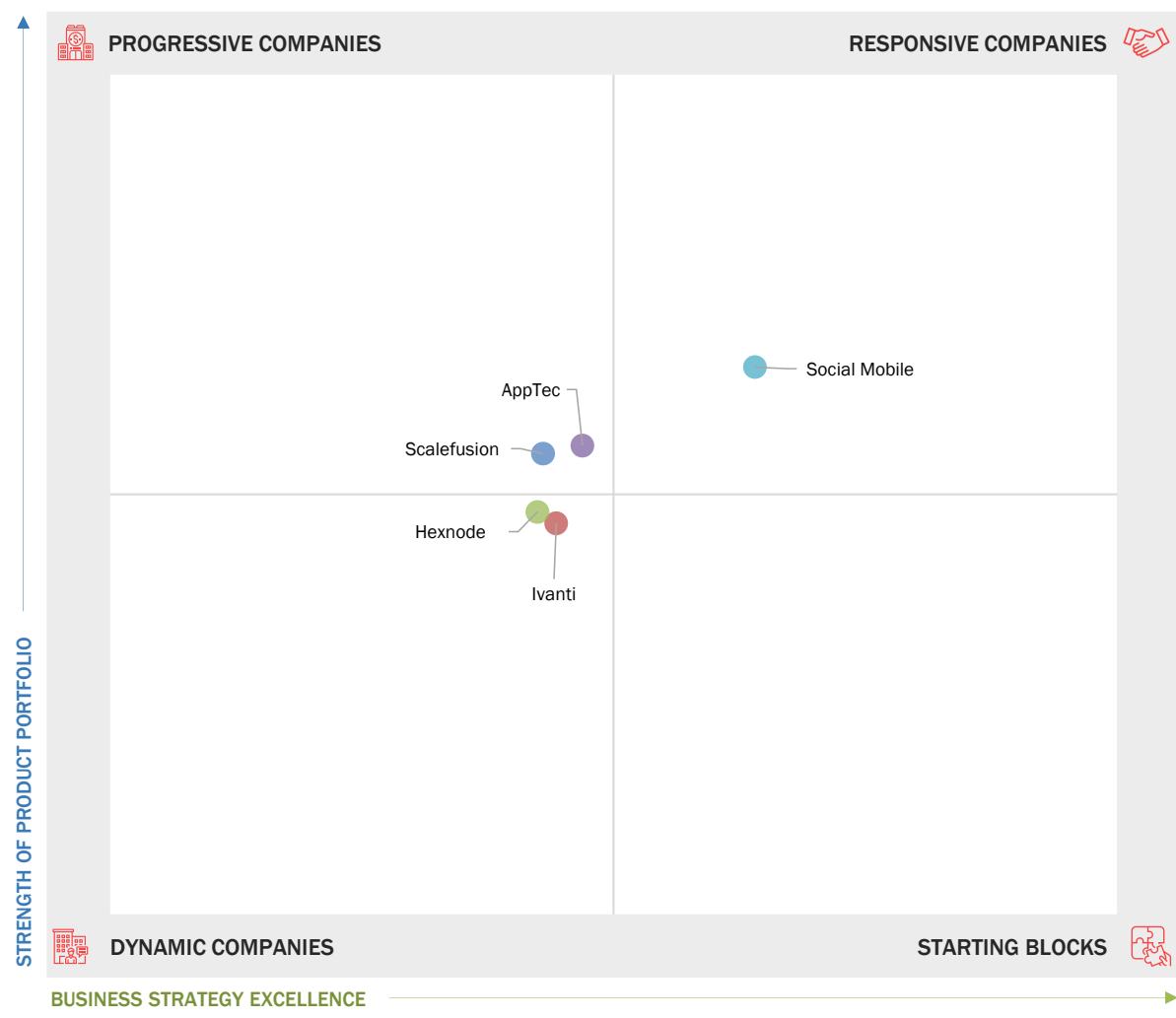
Social Mobile is recognized as a responsive company in the EMM market. These startups are technology disruptors with highly innovative product offerings as compared to their competitors. These companies focus on the constant development of their product/service portfolios and introduce innovations in the market. However, they lag in the business excellence parameter as compared to other startups.

11.9.3 DYNAMIC COMPANIES

Hexnode and Ivanti are recognized as dynamic companies that perform substantially in the business excellence parameter. However, they are slightly low in product excellence as compared to progressive and responsive companies. They generally focus on a specific technology related to a product or service.

11.9.4 STARTING BLOCKS

They are startups with niche offerings and are starting to gain their position in the market. They do not have strong business and product excellence as compared to other established startups. However, they have an opportunity to grab a chance for the consolidation of their market space. They might be new entrants in the market and require some more time to gain significant traction in the market. No EMM vendors fall into this category

FIGURE 53 EMM MARKET (GLOBAL): STARTUP/SME EVALUATION MATRIX, 2020

Source: Press Releases, Expert Interviews, and MarketsandMarkets Analysis

11.9.5 STRENGTH OF PRODUCT PORTFOLIO (STARTUP/SME)

FIGURE 54 PRODUCT PORTFOLIO ANALYSIS OF TOP STARTUPS IN THE EMM MARKET

Company	Breadth and Depth of Product Offering	Delivery	Support	Overall Product Offering
Scalefusion	●●●●	●●●●	●●●●	●●●●
Ivanti	●●●●	●●●●	●●●●	●●●●
Hexnode	●●●●	●●●●	●●●●	●●●●
AppTec	●●●●	●●●●	●●●●	●●●●
Social Mobile	●●●●	●●●●	●●●●	●●●●
RATING : ●●●● EXCELLENT ●●●● GOOD ●●●● AVERAGE ●●●● BELOW AVERAGE ●●●● NOT APPLICABLE				

Source: Press Releases, Expert Interviews, and MarketsandMarkets Analysis

11.9.6 BUSINESS STRATEGY EXCELLENCE (STARTUP/SME)

FIGURE 55 BUSINESS STRATEGY EXCELLENCE OF TOP STARTUPS IN THE EMM MARKET

Company	Geographic Footprint	Channel	Funding	Recent Developments
Scalefusion	●●●●	●●●●	●●●●	●●●●
Ivanti	●●●●	●●●●	●●●●	●●●●
Hexnode	●●●●	●●●●	●●●●	●●●●
AppTec	●●●●	●●●●	●●●●	●●●●
Social Mobile	●●●●	●●●●	●●●●	●●●●
RATING : ●●●● EXCELLENT ●●●● GOOD ●●●● AVERAGE ●●●● BELOW AVERAGE ●●●● NOT APPLICABLE				

Source: Press Releases, Expert Interviews, and MarketsandMarkets Analysis

12 COMPANY PROFILES

12.1 INTRODUCTION

The section provides a brief overview of major players operating in the EMM market and includes their solutions and services, SWOT analysis, and recent developments during the last three years. These players have adopted organic as well as inorganic growth strategies to expand their global presence and increase their shares in the EMM market. The major players of the EMM market generate a significant portion of their revenues from North America, followed by Europe, APAC, MEA, and Latin America.

12.2 IBM

12.2.1 BUSINESS AND FINANCIAL OVERVIEW

IBM operates in five business segments: cognitive solutions, global business services, technology services and cloud platforms, systems, and global financing. The global business services segment contributes the maximum as it helps to improve customer performance with a major focus on IT. IBM has shifted its development from experimental-based to hybrid cloud-based AI-driven applications that focus on digital reinvention. It offers a robust product portfolio and majorly focuses on improving the product efficiency of analytics, cloud, cognitive, commerce, IoT, industry solutions, systems, mobile, security, social, and Watson technologies. IBM's product portfolio includes the analytics cloud platform, blockchain platform, Watson IoT platform, and Watson Customer Engagement. The company has a significant presence in over 175 countries and mainly caters to North America, Southeast Asia, Eastern Europe, MEA, and Latin America.

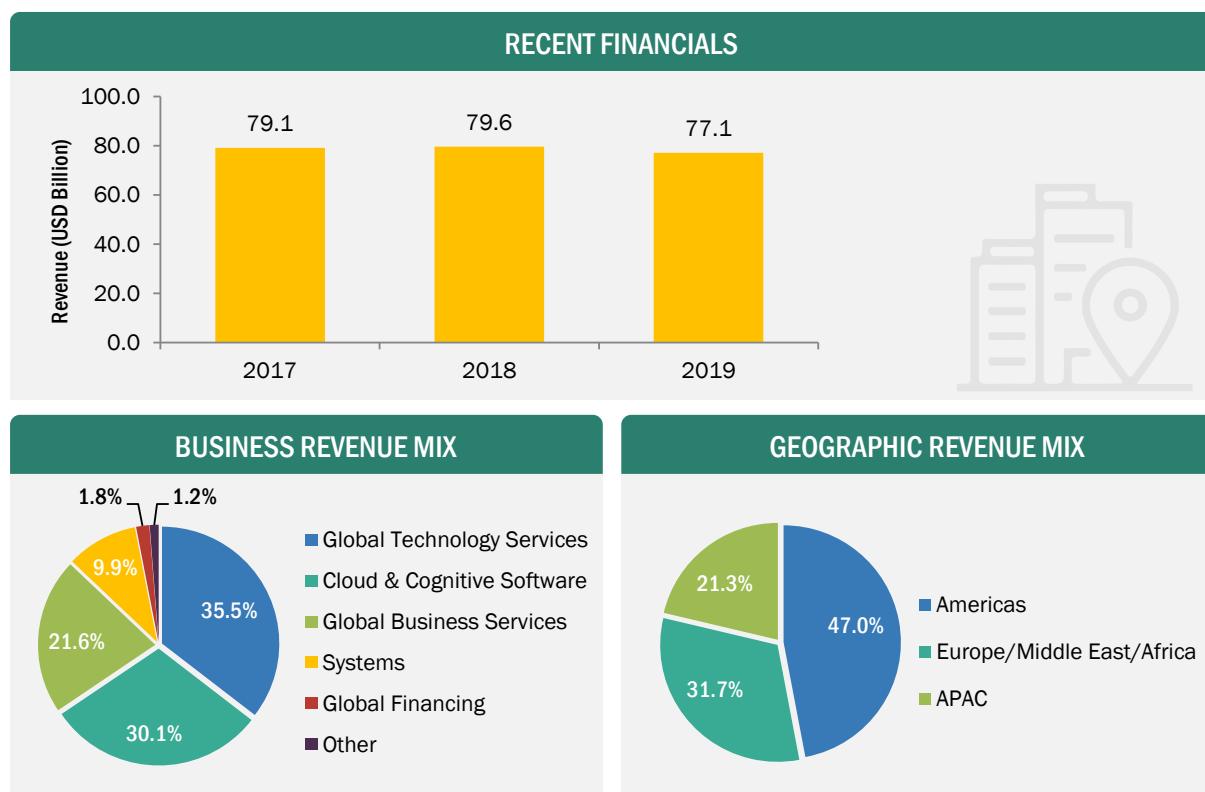
The MaaS360 with Watson has evolved into UEM, leaving behind MDM and EMM to deliver mobile security through an AI-infused, cloud-based, integrated platform. UEM helps IT and security leaders with the technology they need to manage and secure smartphones, tablets, laptops, desktops, wearables, and IoT.

TABLE 108 IBM: BUSINESS OVERVIEW

COMPANY AT A GLANCE - 2019

Year Founded	1911
Headquarters	New York, US
No. of Employees	352,600
Overall Annual Revenue	USD 79.6 Billion
R&D Expenditure	USD 6.0 Billion
Ownership	Public (NYSE: IBM)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 56 IBM: COMPANY SNAPSHOT

Note: The company's fiscal year ends on December 31

Note 1: Recent financials, business revenue mix, and geographic revenue mix are given for the overall company

Source: Company Website, Annual Reports, and SEC Filings

12.2.2 PLATFORM AND SERVICES OFFERED

IBM offers the following platforms in the EMM market:

TABLE 109 IBM: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
IBM MaaS360 with Watson	Based on the powerful Watson AI platform, IBM MaaS360's EMM solution facilitates simplified management of the enterprise device environment at the intersection of user, app, and content. With a multi-layered approach that also includes work/play separation, mobile threat defense, and contextual AI-based analytics, it allows organizations to strike the right balance between productivity and security.	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ EMM ▪ BYOD ▪ Mobile Threat Defense (MTD) ▪ Mobile Application Security ▪ Apple Device Management ▪ Android Device Management ▪ Windows Device Management

Source: Company Website

IBM offers the following services in the EMM market:

CATEGORY	SERVICE
Services	<ul style="list-style-type: none"> ▪ Managed Services ▪ Professional Services

Source: Company Website

12.2.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Product Enhancement	March 2020	Revised technical program	IBM updated the Long-Term Support Release (LTSR) information for FileNet Content Manager V5.5.4, Datacap V9.1.7, and IBM Content Navigator V3.0.7.	Product efficiency is enhanced.
New Product Launch	March 2020	IBM Automation Mobile Capture introduced a mobile app for intelligent document capture	IBM Automation Mobile Capture is an easy-to-use mobile app that captures documents and images, using on-device OCR and ML. Automation Mobile Capture is included in IBM Datacap V9.1.6, IBM FileNet Content Manager V5.5.4, and works with IBM Content Navigator V3.0.6.	It is capable of guided user experience to capture the correct data from documents, confirm the information, and upload it to FileNet Content Manager or Datacap.
New Product Launch	February 2019	Launch of IBM Cloud Integration Platform	IBM launched hybrid cloud offerings to assist businesses in migrating, integrating, and managing applications in both the cloud and on-premise environments.	This solution reduced the integration cost and time by 1/3.
Product Enhancement	December 2018	IBM Latin America software announcement LP18-0639	IBM FileNet Content Manager and IBM Business Automation Workflow are delivering a new charge metric, along with added capabilities for Filenet Content Manager, IBM Content Navigator, and IBM Datacap.	IBM Business Automation Workflow V18.0.0.2 enabled concurrent user license options. Also, products are delivering new and enhanced capabilities.

New Product Launch	December 2018	IBM business automation workflow on cloud express and Enterprise editions to deliver business process and case management capabilities in a single offering	The new digital business automation offering enabled the integration of the capabilities of the business process and case management into a single workflow offering on the cloud. It unites information, process, and users to provide a 360-degree view of work.	Workflow uses advanced analytics, business rules, and collaboration to drive more successful, optimized business outcomes.
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Source: Press Releases

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Partnership	December 2019	Vodafone Idea partnered with IBM to launch a Secure Device Manager	Vodafone Idea Business Services (VIBS), the enterprise arm of Vodafone Idea, launched Vodafone Secure Device Manager (VSDM), powered by IBM Security MaaS360, and Unified Endpoint Management (UEM).	VIBS used IBM Security MaaS360 to deliver an AI approach to UEM for enabling endpoints and maintaining complete security, visibility, and control over any device.
Partnership	November 2019	Partnered with VMware	IBM announced a partnership with VMware to speed up innovation and adoption of hybrid cloud across organizations.	It enabled enterprises to move their workloads of VMware to the cloud securely.
Partnership	June 2019	Partnered with Cloudera	IBM partnered with Cloudera to enable organizations to use advanced data and AI solutions on the Apache Hadoop ecosystem.	IBM will resell Cloudera Enterprise Data Hub and Cloudera DataFlow, while Cloudera will resell IBM's Watson Studio and BigSQL.
Collaboration	February 2019	Zimperium and IBM MaaS360 with Watson combined to deliver complete mobile security, with comprehensive threat protection for mobile devices throughout the enterprise	Zimperium integrated MaaS360 into zConsole, allowing MaaS360 owners to detect mobile risks and threats with Zimperium, and set compliance and remediation policies via MaaS360.	With Zimperium and MaaS360 corporate data, identities and applications can be secured against mobile attacks and mobile OS vulnerabilities. It ensures protection for iOS and Android devices, providing organizations and their users with a flexible mobile experience without sacrificing security.

Agreement	January 2019	Announcement of an agreement with Juniper Networks	IBM Services announced an agreement of USD 325 million with Juniper Networks. The infrastructure, applications, and IT services of Juniper Networks will be assisted by IBM that will reduce their costs and enhance the journey of Juniper Networks to the cloud.	This agreement enabled Juniper Networks to use the cognitive technologies of IBM in creating an agile IT environment.
Partnership	November 2018	Announcement of partnership with ServiceNow	IBM announced a partnership with ServiceNow to ease IT resources management for enterprises across cloud environments.	This partnership provided a standardized IT operations management approach to the enterprises.

Source: Press Releases

12.2.4 MNM VIEW

12.2.4.1 Key strengths/Right to win

IBM is one of the leading providers of EMM solutions. It is committed to bridging the digital divide and promoting digital inclusion. The company focuses on IBM Cloud as it is a platform of choice for all business applications because of its AI compatibility and safety. It is a unifying platform that integrates IBM capabilities with a single architecture and spans public and private cloud platforms. With this powerful cloud platform, the company can cater to the requirements of different businesses across the globe. The company creates value for clients by enabling new capabilities, leveraging products and solutions, and integrating technologies and expertise with business processes with a broad ecosystem of partners and alliances. One-third of IBM's research spending is focused on data, analytics, and cognitive computing. For instance, in February 2019, Zimperium and IBM MaaS360 with Watson combined to deliver complete mobile security, with comprehensive threat protection for mobile devices throughout the enterprise. IBM is also focusing on strengthening its market presence in the regions of MEA, Latin America, and Brazil, Russia, India, and China (BRIC) by deploying MaaS360 across 10 cloud data centers globally.

12.2.4.2 Strategic choices made

IBM introduced IBM's COVID-19 dashboard that enables any user, from scientists to medical professionals, to easily monitor critical data and help them with real-time strategic decision-making. As the world is facing challenges of the COVID-19 pandemic, IBM is providing support to clients, government agencies, and partners for their mission-critical operations. The company provides regular news updates on its efforts. It took up an initiative to confront coronavirus using three broad areas: science and research, trusted information, and resiliency and adaptation. IBM has enhanced its portfolio by launching new solutions, particularly in cloud. Due to these factors, it offers a strong portfolio of solutions and services in cloud. The company continues to invest in long-term opportunities in key growth countries, such as India and China, and Eastern Europe, MEA, and Latin America to widen its product and service portfolio. The acquisition of Red Hat in 2019 strengthened the leadership of IBM in hybrid cloud. As a result, cloud and data platforms witnessed a 10.4% growth in 2019.

12.2.4.3 Weaknesses and competitive threats

IBM's revenue is highly dependent on the Americas as it contributes 47% of its total revenue. As IBM is continuously investing in new technologies and key strategic areas to encourage its revenue growth, the risk of failure of innovative initiatives is also increasing. This could impact its competitiveness. As the company has a global presence, its business and operations could be impacted by local legal, economic, political, and health conditions.

12.3 CISCO

12.3.1 BUSINESS OVERVIEW

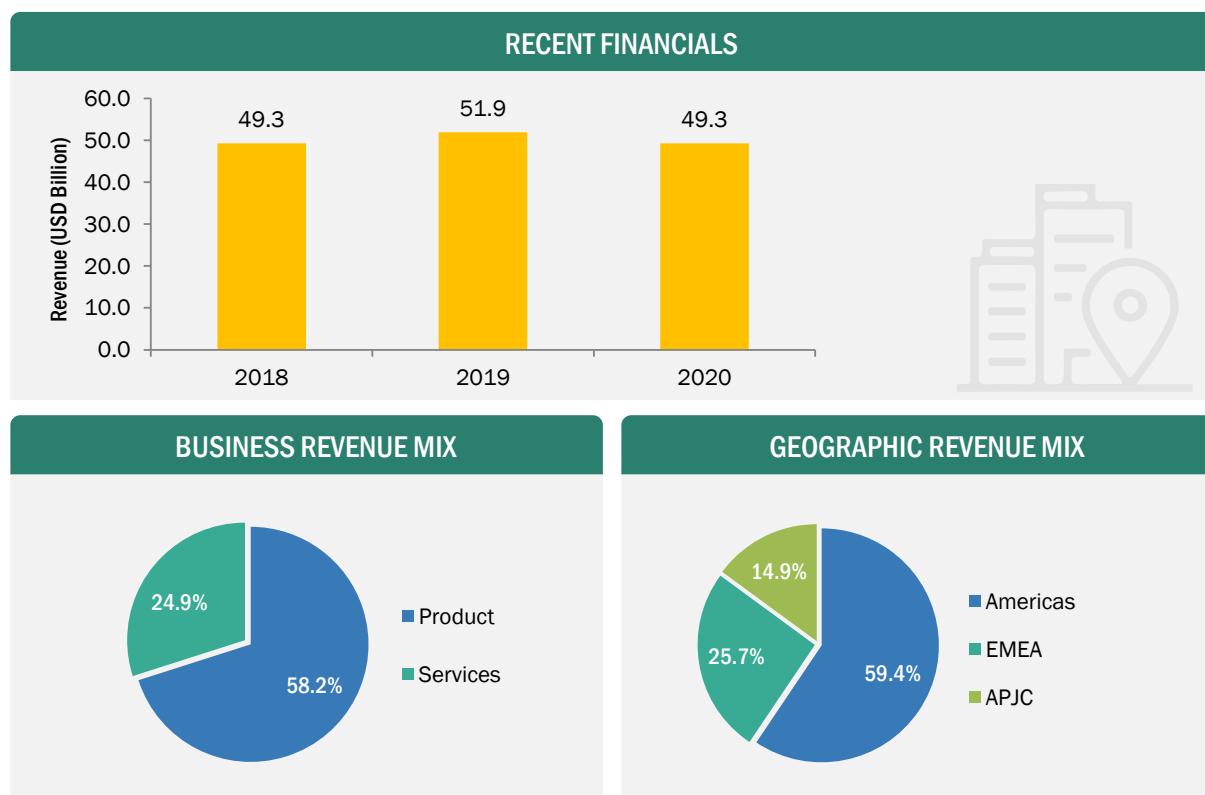
Cisco is one of the largest global providers of networking products and solutions. It offers industry-leading products and solutions in core development areas, such as routing and switching, as well as in advanced technologies, such as home networking, IP telephony, optical networking, security, storage area networking, and wireless technology. Cisco offers its products and solutions through two segments: products and services. The products segment is further segmented into infrastructure platforms, applications, security, and other products. The services segment includes technical support services and advisory services. The applications category includes offerings (unified communications, Cisco TelePresence, and conferencing) as well as IoT and AppDynamics analytics software offerings. The company offers its products in various segments, such as networking, IoT, mobility and wireless, and security catering to different industry verticals, which include BFSI, healthcare, energy and utilities, education, transport and logistics, government, sports and entertainment, manufacturing, and retailer. In addition to its products, Cisco provides a broad range of service offerings, including technical support and advanced services. The company sells its products and services, both directly, through its sales force as well as channel partners, to large enterprises, commercial businesses, service providers, and consumers.

In the EMM market, the company offers the Cisco Meraki Systems Manager, which is a cloud-based EMM solution. It allows IT admins to centrally provision, monitor, and secure all mobile endpoint devices within their organizations, thereby keeping the network alert of the constantly changing devices.

TABLE 110 CISCO: BUSINESS OVERVIEW

COMPANY AT A GLANCE - 2020	
Founded:	1984
Headquarters:	California, US
No. of Employees:	77,500
Overall Annual Revenue:	USD 49.3 Billion
R&D Expenditure:	USD 6.3 Billion
Ownership:	Public (NASDAQ: CSCO)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 57 CISCO: COMPANY SNAPSHOT


Note 1: The company's fiscal year ends on July 27

Note 2: Recent financials, business revenue mix, and geographic revenue mix are given for the overall company.

Source: Company Website, Annual Reports, and SEC Filings

12.3.2 SOLUTIONS AND SERVICES OFFERED

Cisco offers the following solutions:

TABLE 111 CISCO: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
Cisco Meraki Systems Manager	The solution separates personal data from corporate data by implementing a secure method to allow personal devices to access corporate assets. It deploys wireless and VPN connectivity settings, pushes apps and content, or restricts the usage based on user groups. It also protects mobile devices and data with encryption enforcement, enterprise remote wipe, and integrated network access control.	Integrated	<ul style="list-style-type: none"> ▪ BYOD ▪ MDM ▪ Location Analytics ▪ On-device Content Management ▪ Security Policy Enforcement

Source: Company Website

Cisco offers the following services:

CATEGORY	SERVICE
Services	Support and Technology Services

Source: Company Website

12.3.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
New Solution Launch	December 2020	Cisco announced the launch of the new Webex solution to deliver highly personalized insights and actionable recommendations to individuals and teams	Webex enables organizations to collaborate seamlessly and transform their employee and customer experiences.	Webex is helping employees innovate and remain productive wherever they are. Since the pandemic, Webex has not only continued to help businesses thrive, but it has also been an integral platform for governments to continue to lead remotely, doctors to meet with patients safely, and educators to teach students at a distance.
Initiative	June 2020	Cisco deploys public Wi-Fi hotspots for ten community sites across the Cayman Islands	The project was charged and coordinated by Cayman Islands Utility Regulation and Competition Office. The project aimed to help provide relief to the social impact caused by COVID-19 and help bridge the gaps of the digital divide.	The project will serve a great purpose for various people, including students, families, and even young entrepreneurs to work with better connectivity from home.
Initiative	June 2020	Cisco's collaboration technology will offer Dairy Farmers of America (DFA) workforce greater safety, autonomy, and productivity during the COVID-19 pandemic and beyond	This initiative is funded through Cisco's Country Digital Accelerating program, which is active in 34 countries around the world, bringing sustainable digital solutions to address real societal problems.	The project, with technology capabilities, enables DFA to connect its teams across the country in multiple manufacturing facilities with the highest level of security. This access to experts will help it shift production, optimize resources, and increase resolution time as it adapts to the changing demand.

Product Enhancement	March 2020	Cisco expands a simple and secure portfolio with the launch of cloud-driven solutions	The launch of the product would enable small businesses to focus on their core activities by bringing together the power of ML, AI, and cloud-driven solutions, and make buying, installation, and maintenance simple.	The aim of the solution launch is to help small business customers focus on their core businesses rather than the complexity of a network and security products.
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Source: Press Releases

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Agreement	December 2020	Cisco announced an agreement to acquire IMImobile	Both companies have reached an agreement on the terms of a recommended cash offer pursuant to which Cisco will pay 595 pence per share in exchange for each share of IMImobile, or an aggregate purchase price of approximately USD 730 million assuming fully diluted shares, net of cash, and including debt.	IMImobile provides software and services that enable enterprises and organizations to stay constantly connected to their customers through enhanced interactive channels, including social, messaging, and voice. This feature will enable Cisco to offer customer-facing businesses with an end-to-end customer interaction management solution and rich customer experiences.
Acquisition	May 2020	Cisco completes the acquisition of ThousandEyes	Cisco strengthened its network and application performance with ThousandEyes' visibility into the Internet. It would help customers have an end-to-end view of the digital delivery of applications and services over the Internet and enable Cisco users to pinpoint deficiencies and improve network and application performance across enterprise and cloud networks.	The acquisition will empower enterprises to accelerate their digital transformation by delivering comprehensive visibility into applications and services to customers and employees.

Acquisition	October 2019	Cisco completes the acquisition of CloudCherry, a CEM company based in Salt Lake City, Utah	CloudCherry provides customer journey mapping, out-of-the-box integrations, and predictive analytics. Predictive analytics would help contact center agents make real-time journey modifications, such as up and cross-selling, discounts, and service modifications, to meet customer needs and improve loyalty.	This acquisition will help companies transform their contact center, from delivering reactive care to providing predictive support and moving from isolated customer interactions to cohesive, engaging experiences for improved business outcomes.
Acquisition	July 2019	Cisco signed an agreement to acquire Acacia, headquartered in Massachusetts, US	Cisco agreed to acquire Acacia for USD 70 per share in cash or for approximately USD 2.6 billion on a fully diluted basis, net of cash, and marketable securities.	The acquisition enables Acacia to enrich Cisco's optical systems portfolio. It will also enable the growing number of customers transitioning from chassis-based systems to pluggable technology to simplify operations and reduce network complexities.

Source: Press Releases

12.3.4 MNM VIEW

12.3.4.1 Key strengths/Right to win

Cisco focuses on mixing numerous network services to reduce operational complexities and costs. For instance, under the EMM and IoT segment, the company provides products for network connectivity, connectivity management, IOx and fog applications, data analytics, management & automation, and embedded networks. Under the security segment, the company provides products for advanced malware protection, firewalls, security management, cloud security, intrusion prevention, VPN security clients, email security, web security, network visibility & enforcement, and router security. Cisco's IoT portfolio covers Network connectivity, Fog computing, Data analytics, Cyber & Physical Security, Management & automation, and Application platform. This vast product portfolio has earned Cisco an excellent rating for its product offerings. This solution is a constituent of the Cisco Intelligent Networked Manufacturing solution provided by Cisco. The company is expanding its Wi-Fi network by providing advanced location tracking in the WLAN infrastructure.

12.3.4.2 Strategic choices made

Cisco enables developers to create a wide variety of IoT apps, including data aggregation systems and control systems. Cisco Systems continuously innovates its existing product offerings, due to which the company invested USD 6.6 billion in R&D in 2019.

The company has adopted organic and inorganic growth strategies. It has enhanced its products in the IoT cloud platform market in the last two years. For instance, in December 2019, Cisco Systems introduced Cisco IOx 1.10.0, a new version of its Cisco IOx. The company has also adopted inorganic growth strategies, such as acquisitions and agreements, to maintain its leading position in the IoT cloud platform market. For instance, in August 2019, Cisco Systems acquired Sentryo, a France-based software vendor providing cybersecurity and situation awareness solutions dedicated to industrial networks and IoT.

12.3.4.3 Weaknesses and competitive threats

Market consolidation and regulatory challenges can impact Cisco's business. Cisco has less presence in the BPO technology market as compared to its competitors. Complex solution development, implementation, and high cost may impact the adoption of Cisco products in SMEs with limited resources. Intense competition from new entrants may reduce the effectiveness of Cisco's EMM solutions.

12.4 BLACKBERRY

12.4.1 BUSINESS OVERVIEW

BlackBerry, formerly known as Research in Motion (RIM) Limited, offers intelligent security software and services for enterprises and governments worldwide. Till date, the company has secured more than 500 million endpoints, including 150 million cars. These endpoints include smartphones, laptops, desktops, servers, vehicles, industrial equipment, and other connected devices in IoT. The company further provides multiple products and services that are structured into three groups: BlackBerry Spark, BlackBerry IoT Solutions, and BlackBerry IP. As of February 2020, the company had 3,647 full-time employees, with operations in North America, Europe, MEA, APAC, and Latin America. The company trades publicly and is listed on NASDAQ under the ticker symbol BBRY and the Toronto Stock Exchange as TSX: BB.

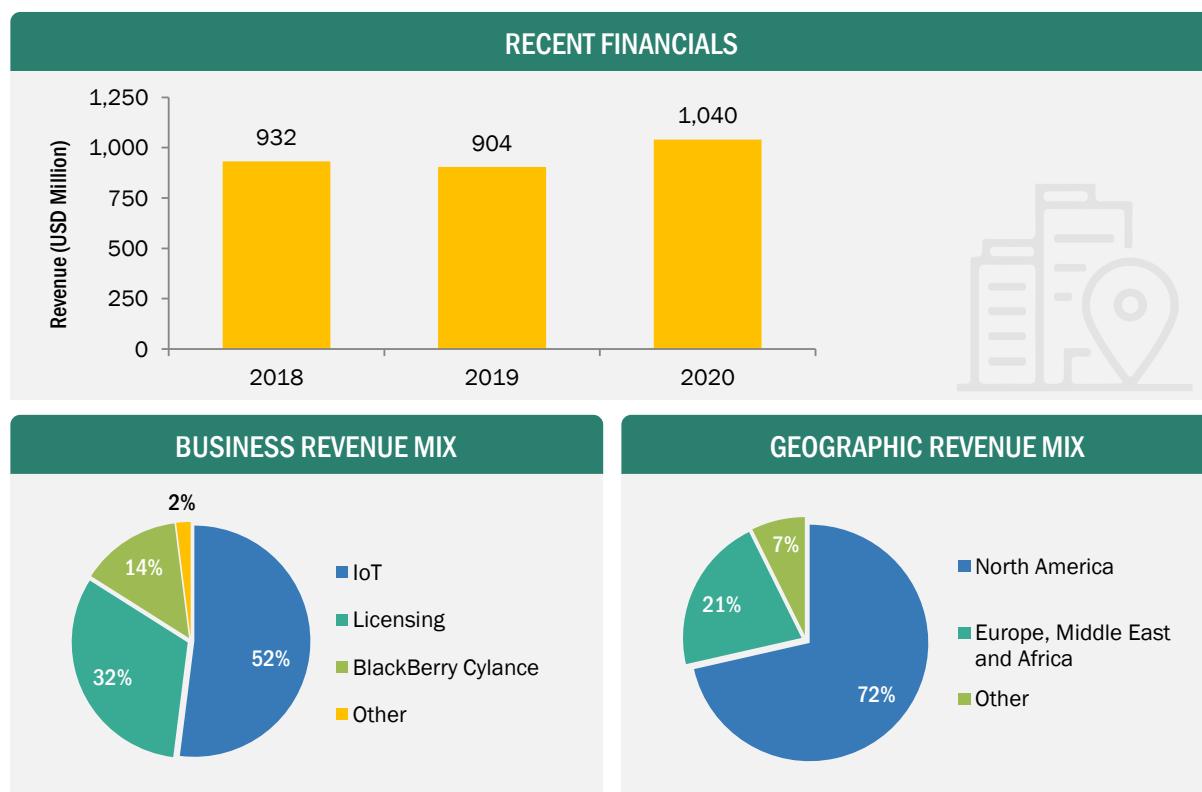
BlackBerry Spark is a software platform that comprises continuous authentication, endpoint protection platform, endpoint detection and response, and mobile threat defense capabilities. It also includes a unified endpoint security layer that integrates with the BlackBerry UEM, and offers visibility and protection across all endpoints, including personal laptops and smartphones that are used for work. It leverages AI, ML, and automation to provide improved cyber threat prevention. The BlackBerry Spark platform includes a suite of security software products and services, including BlackBerry Cylance, BlackBerry UEM, BlackBerry Dynamics, and BlackBerry Workspaces.

BlackBerry Spark UEM Suites consist of MDM, MAM, MCM, and Identity and Access Management (IAM). It offers a single platform that streamlines the management process across devices, apps, files, and users. It can be delivered on-premises, as a cloud service, or as a hybrid model. BlackBerry EMM supports a wide range of mobile devices that run on platforms, such as iOS, Android, Windows, macOS, and BlackBerry. It further enables multiple ownership models, such as BYOD; Company Owned, Personally Enabled (COPE); and Company Owned, Business Only (COBO). The BlackBerry Spark UEM suite helps deliver consistent MDM policies and controls across key platforms and device ownership models.

TABLE 112 BLACKBERRY: BUSINESS OVERVIEW

COMPANY AT A GLANCE-2020	
Founded:	1984
Headquarters:	Ontario, Canada
No. of Employees:	3,945
Overall Annual Revenue:	USD 1,040 Million
R&D Expenditure:	USD 219 Million
Ownership:	Public (NASDAQ: BBRY)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 58 BLACKBERRY: COMPANY SNAPSHOT

Source: Company Website, Annual Reports, and SEC Filings

12.4.2 SOLUTIONS AND SERVICES OFFERED

BlackBerry offers the following solutions:

TABLE 113 BLACKBERRY: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
BlackBerry UEM	BlackBerry UEM securely enables the Internet of Things with complete endpoint management and policy control for the diverse and growing fleet of devices and apps.	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ MAM ▪ MCM

Source: Company Website

Blackberry offers the following services:

CATEGORY	SERVICE
Service	Support and Training

Source: Company Website

12.4.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
New Product Launch	May 2020	BlackBerry launched BlackBerry Spark Suites, which include the BlackBerry Spark UEM Express Suite, BlackBerry Spark UEM Suite, BlackBerry Spark UES Suite, and BlackBerry Spark Suite.	BlackBerry offered its BlackBerry Spark Suites to enterprises that provide a range of tailored cybersecurity and endpoint management options to help protect data, minimize risk, and reduce the overall cost and complexity.	BlackBerry Spark Suites aim at improving the overall user productivity as they combine the best endpoint security and management capabilities. This new suite is powered by AI, ML, and automation for improved cyber threat prevention and remediation.
Product Assistance	March 2020	BlackBerry announced the free availability of secure communication solutions	With the ongoing COVID-19 pandemic, the company offered businesses additional assistance in implementing their remote working programs, at no cost for a period of 60 days.	BlackBerry offered a range of secure communication solutions for enterprises: BlackBerry Desktop, SecuSUITE for Government, and Enterprises for Secure Messaging and Phone Calls, BlackBerry AtHoc for Employee Safety, and BlackBerry Protect. These solutions help the company's customers and other companies to support their business continuity plans and remote working policies by enabling a secure, productive, and connected environment for workers.

Product Enhancement	February 2020	<p>BlackBerry delivered a zero-trust security architecture through its BlackBerry Spark platform. This platform, with a new Unified Endpoint Security (UES) layer, can work with BlackBerry UEM</p>	<p>BlackBerry Spark offers improved cyber threat prevention and remediation, and provides visibility across desktop, mobile, server, and IoT (including automotive) endpoints.</p>	<p>This platform has benefited several users by offering a higher level of security, improved user experience, and productivity, and simplified administration, reduced costs, and eliminated unnecessary friction.</p>
Product Enhancement	November 2020	<p>BlackBerry balanced the productivity and security needs with its updated UEM Software Suite</p>	<p>The company offered its BlackBerry Secure UEM and Productivity Suite to help businesses streamline the management of their fast-changing security and complex IoT environments.</p>	<p>The Secure UEM and Productivity Suite includes Choice Suite, Freedom Suite, and the Limitless Suite. It provides an organization's IT staff and end users with secure access to tools, applications, and files for enhanced productivity, collaboration, and agility.</p>

Source: Press Releases

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Acquisition	February 2019	<p>BlackBerry acquired Cylance, a privately-held AI and cybersecurity company based in Irvine, California</p>	<p>The company added Cylance's technology to its arsenal of cybersecurity solutions to help enterprises intelligently connect, protect, and build secure endpoints.</p>	<p>With the acquisition of Cylance, BlackBerry has become a billion-dollar cybersecurity firm with the technology portfolio that enterprises need to intelligently connect, protect, and help build secure endpoints.</p>

Collaboration	June 2020	BlackBerry and Bell Technologies partnered to deliver enhanced Mobile Threat Defense for its enterprise customers	BlackBerry partnered with Bell Technologies to provide enhanced secure communications for businesses and government customers via its mobile threat defense solution called BlackBerry Protect, thereby strengthening their longstanding relationship with Canadian and business customers.	This partnership aims to bring excellence in endpoint security to Canadian enterprise customers across the country during COVID-19, as it is important to stay vigilant about security, including network and mobile device management.
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Source: Press Releases

12.4.4 MNM VIEW

12.4.4.1 Key strengths/Right to win

BlackBerry has been recognized as a global leading mobile enterprise innovative solution provider across the entire mobile ecosystem. After the acquisition of Good Technology in 2015, the company enhanced its product offerings in the mobile enterprise management segment across all platforms. The company offers the most secure end-to-end mobile enterprise solutions in the market. For maintaining a presence in the highly competitive smartphone and devices market, the company refocused its business on enterprise services and solutions. Its enterprise software offerings support all major OS and device ownership models used in enterprises. BlackBerry has a focus on mobile security and adaptive artificial intelligence (AI) that can dynamically change security requirements for devices and apps. BlackBerry UEM supports up to 25,000 devices per server and 150,000 devices per domain; supported operating systems include Android, iOS, Windows 10, macOS, and Chrome OS.

12.4.4.2 Strategic choices made

In response to COVID-19 impact, the company offers EFSS solutions with a containerized environment that enables employee productivity, without the complexities and high costs of traditional VPNs or Virtual Desktop Infrastructure (VDI). Moreover, data path controls are actively promoted to securely route traffic through the firewall, and at the same time, keep intranet and any SaaS data secure and containerized. BlackBerry also delivers support for PAC files.

The company is focused on the adoption of organic and inorganic growth strategies to enhance its market presence. As part of its organic growth strategy, the company is focused on launching new products as well as upgrading its existing products. Over the past few years, the company has invested in R&D activities to develop advanced products and services in the EMM market. For instance, the company spent approximately 24% of its overall revenue on R&D activities in 2019.

The company is also focused on enhancing its product and service offerings through the acquisition of Good Technology, AtHoc, and WatchDox. It has successfully integrated the technologies from these acquired companies with its existing products. It also partnered with key market players to expand its product offerings and enhance its geographic reach. For instance, in February 2019, BlackBerry acquired Cylance, a privately-held AI and cybersecurity company, and added Cylance's technology to its arsenal of cybersecurity solutions to help enterprises intelligently connect, protect, and build secure endpoints. The company has a very strong partner ecosystem, including solution providers, Independent Software Vendors (ISVs), service and training partners, and value-added integrators. This helps the company in catering to a wide range of customers across the globe. In terms of competition, BlackBerry faces steep competition from VMware, Microsoft, IBM, MobileIron, SOTI, Sophos, and Citrix Systems.

12.4.4.3 Weaknesses and competitive threats

The company faces intense competition from Microsoft, IBM, MobileIron, and SAP. Moreover, government regulations applicable to the company's products and services, including products containing encryption capabilities, could negatively impact the company's business. With the acquisition of AtHoc and Good Technology, the company can strengthen and maintain its leading position in enterprise mobility as AtHoc provides secure communication solutions while Good Technology enhances user privacy.

12.5 MICROSOFT

12.5.1 BUSINESS AND FINANCIAL OVERVIEW

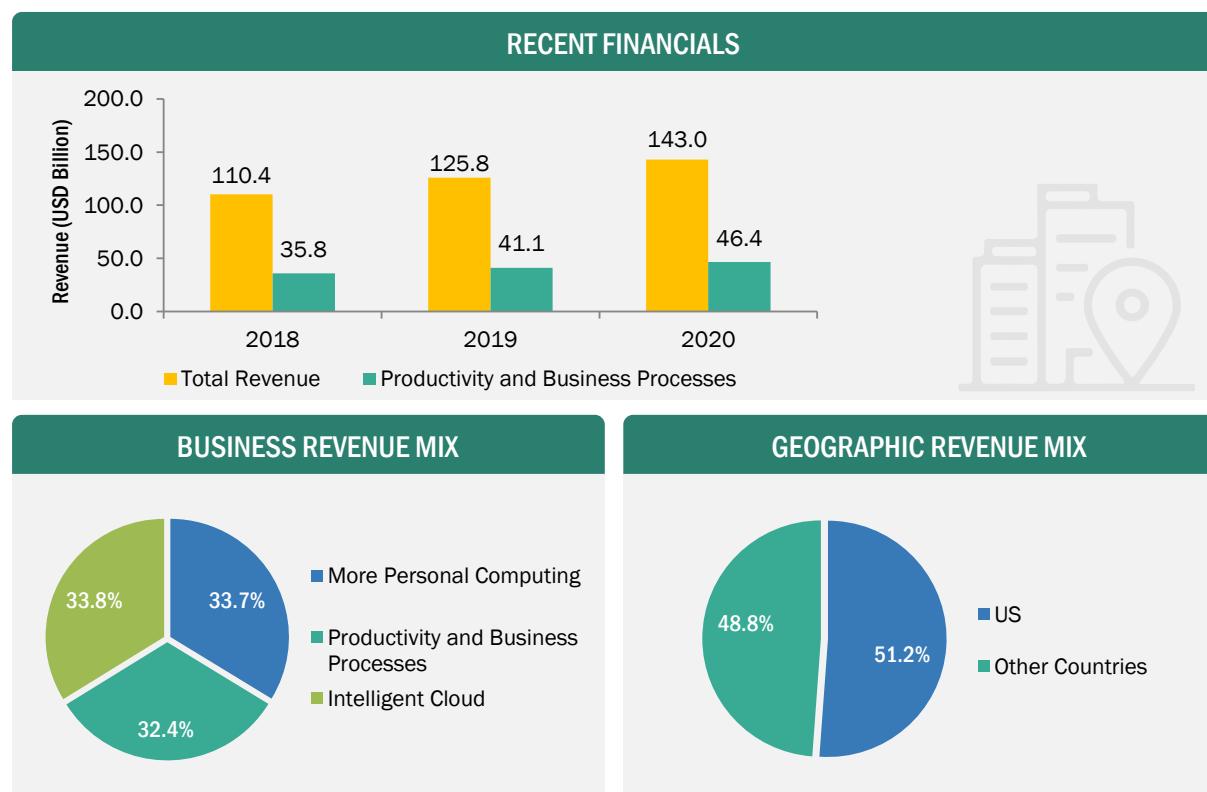
Microsoft develops software, services, devices, and solutions to compete in the era of intelligent cloud and intelligent edge. With the increase in investments on a mix-reality cloud, Microsoft enables its customers to digitalize their business processes. The company's offerings include cloud-based solutions that provide customers with software, platforms, content, and deliver solution support and consulting services for its clients. Its product offerings include Operating Systems (OS), cross-device productivity applications, server applications, business solution applications, desktop and server management tools, software development tools, and video games. Microsoft's offering of platforms and tools helps drive the productivity of small businesses, competitiveness of large businesses, and efficiency of the public sector. It works on three pillars, which include privacy, cybersecurity, and responsible AI, to provide tools and frameworks for its customers to encourage policy change. The company focuses on investing in data centers and other hybrid and edge infrastructure to enhance its service offerings. Microsoft operates in three segments that include productivity and business processes, intelligent cloud, and more personal computing. The company caters to a wide range of verticals, including finance and insurance, manufacturing and retail, energy and utilities, media and entertainment, public sector, healthcare, and IT and telecommunications. It has a geographical presence in more than 190 countries across North America, APAC, Latin America, MEA, and Europe.

In the EMM market space, the company offers Microsoft Intune. Microsoft Intune is a cloud-based solution that focuses on MDM and MAM. Intune is part of Microsoft's Enterprise Mobility + Security (EMS) suite. This intelligent mobility management and security platform protects and secures enterprises and empowers employees to work in new and flexible ways. Intune helps enterprises to securely manage iOS, Android, Windows, and macOS devices with a single endpoint management solution. It further ensures that all the company-owned and Bring Your Own (BYO) devices are managed and always up-to-date with the most flexible control over any Windows, macOS, iOS, and Android devices. It also provides integrated data protection and compliance capabilities. Intune helps streamline and automate deployment, provisioning, policy management, app delivery, and update, thus providing granular control over Office 365 data on mobile devices.

TABLE 114 MICROSOFT: BUSINESS OVERVIEW

COMPANY AT A GLANCE - 2020	
Year Founded	1975
Headquarters	Washington, US
No. of Employees	163,000
Overall Annual Revenue	USD 143.0 Billion
R&D Expenditure	USD 19.3 Billion
Ownership	Public (NASDAQ: MSFT)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 59 MICROSOFT: COMPANY SNAPSHOT

Source: Company Website, Annual Reports, and SEC Filings

12.5.2 PLATFORMS AND SERVICES OFFERED

Microsoft offers the following platforms in the EMM market:

TABLE 115 MICROSOFT: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
Microsoft Intune	<p>Microsoft's Enterprise Mobility Suite is a collection of mobile solutions that allows users to access their favorite apps as well as company information without putting data at risk.</p> <p>Microsoft Intune is a cloud-based service that focuses on MDM and MAM.</p>	Integrated	<ul style="list-style-type: none"> ▪ MAM ▪ MDM ▪ UEM

Source: Company Website

Microsoft offers the following services in the EMM market:

CATEGORY	SERVICE
Services	<ul style="list-style-type: none"> ▪ Consulting Services ▪ Support Services

Source: Company Website

12.5.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Initiative	June 2020	Microsoft announced a new global skills initiative required for the COVID-19 scenario	The objective of the initiative is to provide extensive access to digital skills in improving the economic recovery, particularly for the people hardest hit by job losses.	The initiative will provide immediate steps to help those looking to reskill and pursue an in-demand job and brings together every part of the company, combining existing and new resources from LinkedIn, GitHub, and Microsoft.
Solution Enhancement	March 2020	Improve virtual meetings and bring consultations online	Microsoft added new features and capabilities designed to help businesses moving during COVID-19 and beyond.	SharePoint's crisis management site is helping the organization to quickly share information during emergencies.
Geographic Expansion	February 2020	Microsoft to open a new datacenter region in Spain and expand partnership with Telefónica to boost competitiveness	Microsoft would open a datacenter region in Spain to help accelerate the digital transformation of public and private entities of all sizes, helping them to innovate, scale, and migrate their businesses to the cloud in a secure way.	Microsoft would deliver intelligent Microsoft cloud services, including Microsoft Azure, Microsoft 365, Microsoft Dynamics 365, and Microsoft Power Platform from new datacenter regions in Spain. Additionally, Telefónica would accelerate its internal digital transformation by choosing Microsoft as its strategic cloud partner.
Solution Enhancement	May 2019	New capabilities in Microsoft 365	Microsoft introduced new tools to help simplify compliance, app updates to boost productivity, and features to foster secure, collaborative user experiences.	Clients are leveraging the benefits of new updates of SharePoint.

Solution Enhancement	May 2019	Innovations in SharePoint and across Microsoft 365	<p>Innovation includes SharePoint home sites, a dynamic, engaging, and personalized employee experience for the organization. These innovations power the intelligent workplace, where teams can collaborate and streamline workflows, organizations can engage employees and communicate effectively, and individuals can be more creative and productive with experiences and insights powered by AI.</p>	<p>This innovation powers individual productivity with personalized content, information, and navigation.</p>
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Source: Press Releases

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Partnership	July 2020	Citrix and Microsoft joined hands to reimagine new flexible workplaces during the COVID-19 pandemic situation	<p>Under the partnership, Microsoft will select Citrix Workspace as a preferred digital workspace solution, and Citrix will select Microsoft Azure as a preferred cloud platform, moving Citrix's existing on-premises customers to Microsoft Azure to enable them to work anywhere across devices.</p>	<p>Citrix and Microsoft will provide joint tools and services to simplify and speed the transition of Citrix's on-premises customers to Microsoft Azure. Both companies will also devise a connected roadmap to enable a consistent and optimal flexible work experience.</p>
Partnership	June 2020	Microsoft partnered with SAS to bring cloud-based SAS industry solutions to its customers	<p>Microsoft and SAS announced an extensive technology and go-to-market strategic partnership. As a part of the partnership, both companies would migrate SAS' analytical products and industry solutions to Microsoft Azure as the preferred cloud provider for SAS Cloud.</p>	<p>Through this partnership, Microsoft and SAS would help their customers increase growth and find new ways to encourage innovations with a broad set of SAS Analytics offerings on Microsoft Azure.</p>

Partnership	June 2020	<p>Microsoft partnered with Adaptive Biotechnologies to launch the ImmuneCODE database to share a population-wide immune response of the COVID-19 virus</p> <p>The partnership focuses on providing advanced solutions for diagnosing, treating, and preventing the virus, and improving the existing research efforts that mainly focus on the biology of the virus. This data would be made freely available to any researcher, public health official, or organization worldwide via an open data access portal.</p>	<p>The partnership could help diagnose and manage COVID-19 from exposure through the clearance of the virus, and potentially offer an accurate assessment of immunity. The data from ImmuneCODE would improve global efforts to develop improved diagnostics, vaccines, and therapeutics.</p>
Collaboration	May 2020	<p>Microsoft collaborated with UnitedHealth Group to launch the ProtectWell protocol and application to support return-to-workplace planning and COVID-19 symptom screening</p> <p>ProtectWell combines UnitedHealth Group's clinical and data analytics capabilities, with Microsoft's technology leadership, to help in the next phase of COVID-19 recovery efforts. The ProtectWell application is powered by Microsoft Azure, AI, and analytics solutions, and takes advantage of the Microsoft Healthcare Bot service, which is used worldwide for AI-assisted COVID-19 symptom triaging.</p>	<p>The launch of ProtectWell would be an effective tool to ensure employers and employees have the information and resources they need to keep themselves, their colleagues, and the public safe and healthy.</p>
Partnership	March 2020	<p>Microsoft partnered with Adaptive Biotechnologies to help during the COVID-19 pandemic</p> <p>The partnership aimed to provide advanced solutions to diagnose, treat, and prevent the disease, augmenting existing research efforts that primarily focus on the biology of the virus. This data will be made freely available to any researcher, public health official, or organization worldwide via an open data access portal.</p>	<p>Leveraging Microsoft's hyperscale machine learning capabilities and the Azure cloud platform, the accuracy of the immune response signature will be continuously improved and updated online in real-time as more trial samples are sequenced from the study.</p>

Integration	February 2019	Sophos Mobile Security solution integrated with Microsoft Intune	The integration allows Microsoft Intune customers, running the Sophos Mobile Security 9.0, to configure access controls fed by the latest mobile device threat information. It has helped employees to increase the overall productivity, thereby allowing them to access their data securely from any device or location while maintaining corporate compliance.	With this integration, Sophos can now offer a smarter MDM solution.
Partnership	April 2019	Dell Technologies partnered with Microsoft	The companies delivered a fully native, supported, and certified VMware cloud infrastructure on Microsoft Azure. The partnership aims to address a wider range of customer needs and helps accelerate digital transformations.	This partnership helped customers to use Workspace ONE to manage and secure powerful productivity features of Office 365 across devices via cloud-based integration with Microsoft Intune and Azure Active Directory.

Source: Press Releases

12.5.4 MNM VIEW

12.5.4.1 Key strengths/Right to win

Microsoft has been a renowned global vendor in providing a diverse set of software, licensing solutions, and hardware products across different industrial verticals, including healthcare, telecom, and manufacturing. It focuses majorly on keeping its customers updated on the developing market trends, such as progressions in cloud applications, IoT, and mobility. Microsoft's offerings in the EMM market space are designed to empower its commercial clientele through software, which is accessible at any time, any place, and on any device. The company offers the Intune solution, which is a diverse set of tools that manages complex mobile environments. Microsoft Intune is also an EMM solution that helps enterprises in addressing problems related to MDM and Mobile Application Management (MAM).

The company is focused on undergoing technological innovations to introduce new products in the EMM market. It is also focused on increasingly investing in R&D activities to enhance its product portfolio. For instance, in 2019, Microsoft invested USD 16.8 billion in R&D activities. In recent years, Microsoft has adopted organic and inorganic growth strategies, such as partnerships, collaborations, acquisitions, new product launches, and product enhancements, to strengthen its foothold in the EMM market. For instance, in September 2017, Dell Technologies partnered with Microsoft, thus helping customers to use VMware's Workspace ONE to manage and secure powerful productivity features of Office 365 across devices via cloud-based integration with Microsoft Intune and Azure Active Directory.

Microsoft collaborated with Jamf to provide an automated compliance management solution for Mac devices accessing applications set up with Azure AD authentication. The company sells and delivers its products and services through direct channels, Original Equipment Manufacturers (OEMs), and distributors and resellers.

12.5.4.2 Strategic choices made

In April 2020, Microsoft launched an Open Data Campaign for organizations of all sizes to realize data and new technology benefits. With this campaign, businesses can benefit from opening, sharing, and collaborating data to make enhanced decisions, improve efficiency, and help tackle the most pressing societal challenges. In September 2020, Microsoft announced cloud innovation to simplify security, compliance, and identity. With this innovation, Microsoft offers a unique approach that provides security professionals with both cloud-native Security Information and Event Management (SIEM) and Extended Detection and Response (XDR) tools from a single vendor. This brings a new level of integration that gives defenders the best of both worlds—end-to-end visibility across their resources and intelligent alerts built with a deep understanding of individual resources and enhanced with human and machine intelligence.

12.5.4.3 Weaknesses and competitive threats

Based on the geographic mix of 2019, it can be said that Microsoft is dependent on the US market for most of its revenue as it constitutes a 51% share in the country's market. The Azure platform witnesses diverse competition from major companies, such as Amazon, Google, IBM, Oracle, AWS, VMware, and open-source offerings. The company's investments in infrastructure may increase its operating costs and affect its operating margins. In 2020 Q3 and Q4, Microsoft is projected to witness adverse impacts on its supply chain, a slowdown in transactional licensing, and lower demand for its advertising services due to the COVID-19 situation.

12.6 VMWARE

12.6.1 BUSINESS AND FINANCIAL OVERVIEW

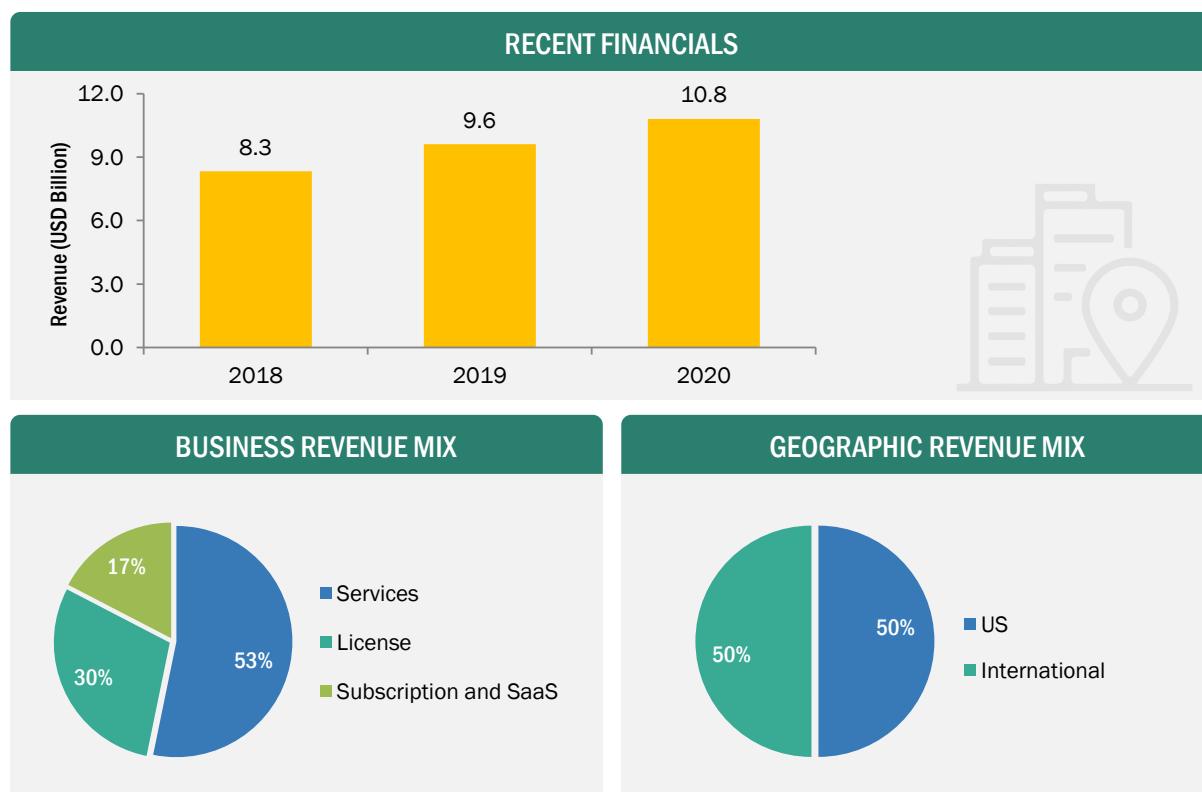
AirWatch was an Atlanta-based provider of EMM software and standalone management systems for content, applications, and email. In February 2014, VMware acquired AirWatch.

In the EMM market, the VMware AirWatch offers its flagship product called WorkSpace One, an EMM software, which aims to protect corporate applications and data accessed from any device on any network. Workspace ONE is powered by UEM (formerly known as AirWatch). Workspace ONE UEM helps organizations manage the full lifecycle of any endpoint, such as mobile (Android, iOS), desktop (Windows 10, macOS, Chrome OS), rugged, and even IoT (Linux and others) in a single management console. Workspace ONE UEM is powered by AirWatch technology that supports all mobility use cases: corporate-owned, BYOD, purpose-built, or shared devices. Workspace ONE UEM can be easily integrated with existing enterprise infrastructure, and enterprises can gain visibility across mobile device deployment. The product supports Apple iOS, Android, Chrome OS, BlackBerry QNX, and Samsung Tizen. The EMM suite is available for on-premises deployment or as a cloud service.

TABLE 116 VMWARE: BUSINESS OVERVIEW

COMPANY AT A GLANCE - 2020	
Founded:	1998
Headquarters:	California, US
No. of Employees:	31,000
Overall Annual Revenue:	USD 10.8 Billion
R&D Expenditure:	USD 2.5 Billion
Ownership:	Public (NYSE: VMW)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 60 VMWARE: COMPANY SNAPSHOT

Source: Press Releases, SEC Filings, and Annual Reports

12.6.2 SOLUTIONS AND SERVICES OFFERED

VMware AirWatch offers the following solutions in the EMM market:

TABLE 117 VMWARE: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
WorkSpace One UEM	Workspace ONE UEM integrates multi-platform endpoint management, app management, access control, and more for BYOD and corporate-owned use cases, allowing IT to improve the employee experience, secure company data, and reduce operational costs.	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ MAM ▪ Identity Management ▪ Enterprise File Sync-and-Sharing (EFSS) ▪ Telecom expense management

Source: Company Website

VMware offers the following services in the EMM market:

CATEGORY	SERVICE
Services	<ul style="list-style-type: none"> ▪ Professional Services ▪ Learning ▪ Customer Success Services ▪ Support Services

Source: Company Website

12.6.3 RECENT DEVELOPMENTS

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Acquisition	October 2019	VMware acquired Carbon Black, a leading next-generation security cloud provider	With this acquisition, VMware provided a highly differentiated, intrinsic security cloud that protected enterprise workloads and clients through big data, behavioral analytics, and AI.	The combination of Carbon Black's solutions with VMware's security offerings, including AppDefense, Workspace ONE, NSX, and SecureState, created a modern security cloud platform for any application, running on any cloud, and on any device.
Product Enhancement	August 2019	VMware unveiled innovations across its industry-leading Workspace ONE Platform	The new modern management, security, and multi-cloud VDI innovations enable the IT staff to leverage the power of automation to intelligently manage and secure access to any app, on any cloud, and delivered to any device.	The company launched Digital Employee Experience Management, a new Workspace ONE Intelligence service that helped IT teams to proactively detect and automatically remediate potential issues that might impact employee experience across their hardware, OS, and applications, based on real-time telemetry from their digital workspace environment.
Acquisition	February 2019	VMware acquired Aetherpal, a provider of remote support solutions	AetherPal's Remote Support solution capabilities were added to VMware Workspace ONE through Workspace ONE Advanced Remote Management.	With the acquisition, VMware helped its customers to simplify the digital workspace journey.

Source: Press Releases

12.6.4 MNM VIEW

12.6.4.1 Key strengths/ Right to win

VMware is one of the leading mobile management and security solution providers. The company is focused on investing in R&D activities to develop innovative products in the EMM market. In 2020, the company invested approximately 23% of its total revenue in R&D activities to strengthen its foothold in the EMM market. The company's UEM (previously known as AirWatch) offerings are sold as SaaS and perpetual licenses. It also included new solutions, such as content locker, emails, and containerization of applications in the MDM segment to strengthen its solutions and services.

12.6.4.2 Strategic choices

In response to the COVID-19 impact, the VMware Crisis Management teams follow the VMware contagious illness response plan, which provides guidelines, processes, and procedures for responding to and managing the occurrence of a contagious illness outbreak that affects VMware facilities worldwide. Moreover, the information and procedures presented in the plan are based on recommendations from the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), and other authoritative sources.

The strategic intent of VMware is to leverage its brand image and enhance its product and service offerings. The company focuses on implementing a partner-centric strategy, which involves the enhancement of the virtualization technology through product development and collaboration. The company focuses on the adoption of organic growth strategies to enhance its market presence. For instance, in August 2019, the company unveiled innovations across its industry-leading Workspace ONE Platform. The new modern management, security, and multi-cloud VDI innovations enable the IT staff to leverage the power of automation to intelligently manage and secure access to any app, on any cloud and delivered to any device. This development strategy helped the company widen its customer base in the EMM market.

12.6.4.3 Weaknesses and competitive threats

VMware's reference customers identify cost as the main barrier to widen the deployment of its software. Industry-specific regulations; other requirements and standards; and unfavorable industry-specific laws, regulations, and interpretive positions or standards could harm the company's business. The company may face competition from software companies that provide their product or service free of charge, and only charge a premium for advanced features and functionality.

12.7 SAP

12.7.1 BUSINESS AND FINANCIAL OVERVIEW

The company's legal corporate name is SAP SE. It is a key vendor offering enterprise application software, and analytics and business intelligence solutions. The company segments its diverse portfolio into applications, technologies and services segment, SAP business network, and the customer experience segment. It is focused on end-to-end customer experience. The solutions enable enterprises to build intelligent AI and ML-based software to unite human expertise with machine-generated insights. The company caters to various industry verticals, such as energy and natural resources, BFSI, consumer, discrete, service, and public services. It offers support and maintenance, and training services. The company has a presence in North America, Latin America, Europe, MEA, and APAC. In 2019, SAP acquired Qualtrics International Inc. Qualtrics is the global pioneer of the Experience Management (XM) software category that enables organizations to thrive in today's experienced economy.

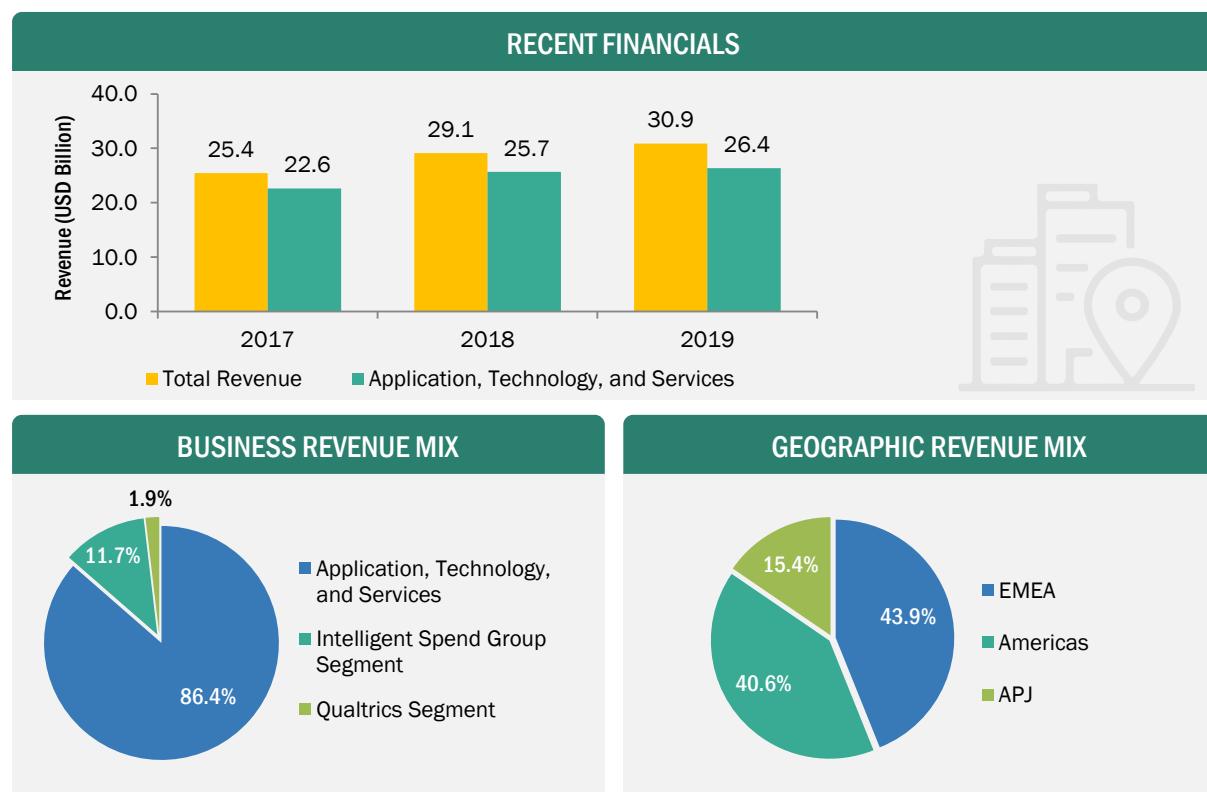
In the EMM market, the company offers SAP Mobile Secure. It provides customers with the best enterprise-grade security solution for managing applications, content, and mobile devices. With numerous customer deployments of more than 100,000 devices, SAP Mobile Secure smartly scales to address the needs of organizations just getting started on their mobile journey as well as those requiring the most sophisticated and granular application and device-level controls.

TABLE 118 SAP: BUSINESS OVERVIEW

COMPANY AT A GLANCE - 2019

Founded:	1972
Headquarters:	Walldorf, Germany
No. of Employees:	100,330
Overall Annual Revenue:	USD 30.9 Billion
R&D Expenditure:	USD 4.8 Billion
Ownership:	Public (NYSE: SAP)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 61 SAP: COMPANY SNAPSHOT

Source: Company Website, Annual Reports, and SEC Filings

12.7.2 SOLUTIONS AND SERVICES OFFERED

SAP offers the following solutions in the EMM market:

TABLE 119 SAP: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
<ul style="list-style-type: none"> ▪ SAP Hana Cloud Platform ▪ SAP Mobile Secure 	<p>SAP Integration Suite (formerly SAP Cloud Platform) offers a complete enterprise-grade approach to mobility management in the cloud. The comprehensive platform includes tools for mobile device management, BYOD security, and even compliance support with applications.</p> <p>SAP Mobile Secure is a set of cloud-based Enterprise Mobility Management (EMM) solutions that Mobile Network Operators (MNO) can sell to enterprises.</p>	Integrated	<ul style="list-style-type: none"> ▪ MCM ▪ BYOD Policy Management ▪ MAM ▪ MDM

Source: Company Website

SAP offers the following services in the EMM market:

SERVICE	DESCRIPTION
SAP HANA Cloud Platform Mobile Services	This platform-as-a-service (PaaS) is designed to drive mobile business innovation with simplicity by connecting people, devices, and business networks using SAP's unique end-to-end capabilities covering the development, staging, and secure deployment of mobile apps.

Source: Company Website

12.7.3 RECENT DEVELOPMENTS

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Fund Raising	April 2020	Contributing €3M to the COVID-19 Emergency Fund	SAP has contributed €3M to the COVID-19 Emergency Fund to support the urgent needs of the World Health Organization (WHO), the CDC Foundation, and smaller nonprofits and social enterprises that work on the front lines serving local communities in crisis.	SAP increased the support toward the social sector partners globally.
Partnership	May 2019	SAP partnered with OpenText to extend the SAP Cloud Platform	The new OpenText content services were being delivered through SAP Cloud Platform and other SAP solutions. Together, companies brought structured and unstructured information to deliver content in the context of key business processes.	OpenText content services for the SAP Cloud Platform provide a centralized content repository and advanced content capabilities across SAP applications, which make it a powerful combination to reduce information sprawl and content management costs.
Acquisition	January 2019	Acquisition of Qualtrics International Inc.	The acquisition accelerated the new XM category by combining Qualtrics' experience data with operational data from SAP software to power the economy.	Together, SAP and Qualtrics are offering businesses the means to deliver exceptional customer, employee, product, and brand experiences.

Source: Press Releases

12.8 CITRIX

12.8.1 BUSINESS AND FINANCIAL OVERVIEW

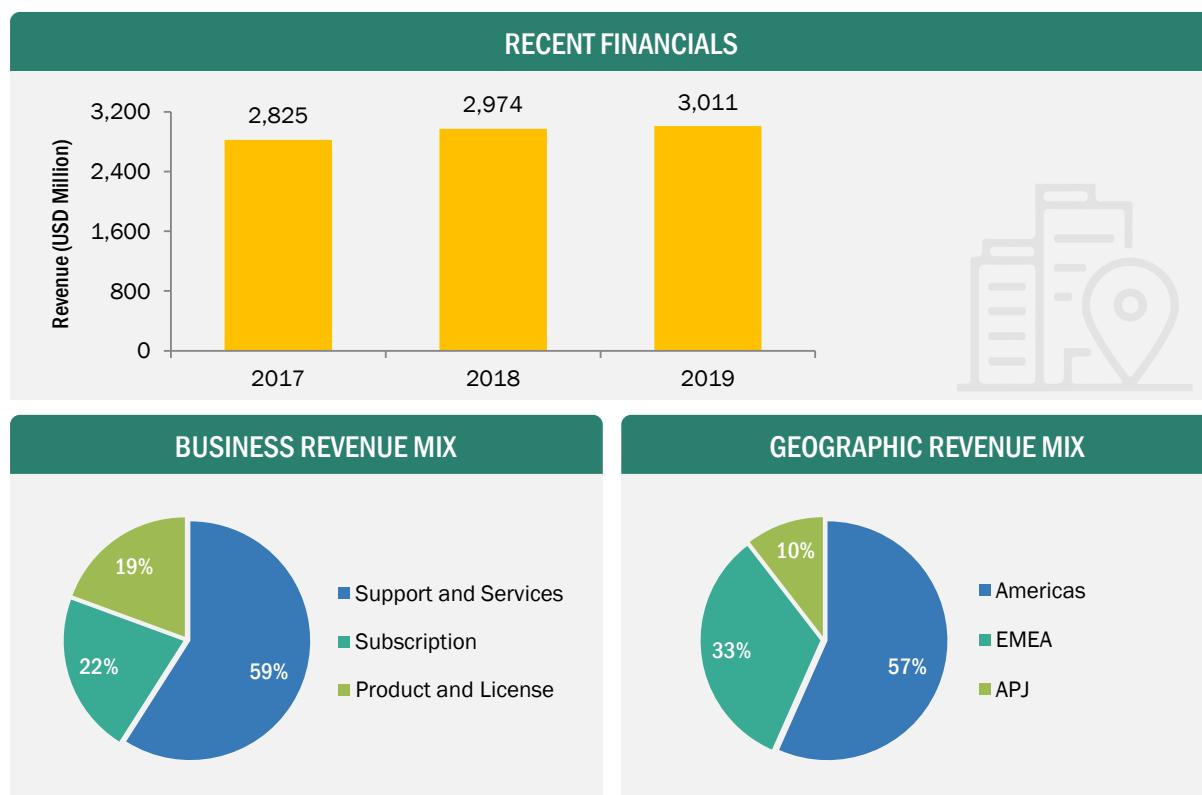
Citrix Systems is an enterprise software company that focuses on helping its customers to improve productivity and user experience of their most valuable assets, their employees. To make employees more productive anytime, anywhere, on any device, it created a digital workspace that provides unified, secure, and reliable access to all the applications and content. The company is evolving its business in three primary ways: on-premises to the cloud, perpetual to subscription, and point products to the platform. The company offers solutions and services categorized into three inter-related and complementary areas: workspace, networking, and professional services. The Citrix Workspace platform encompasses a broad range of features and functionalities that include Citrix Virtual Apps and Desktops, Citrix Content Collaboration, Citrix Endpoint Management, and Workspace Intelligence.

Citrix Endpoint Management offers UEM that allows IT staff to adhere to security and compliance requirements for BYOD programs and corporate devices while enabling user productivity. It provides a policy framework that allows enterprises to manage devices, apps, files, and network access through a single console, directly integrating with Microsoft EMS/Intune to extend mobility and device management capabilities. It leverages more than 200 MDM policies and more than 70 MAM policies for non-Office 365 apps. Citrix Endpoint Management and Android Enterprise deliver controls that an organization requires to protect the information irrespective of the ownership model, thus enabling user productivity. It helps organizations to get comprehensive mobile devices, apps, and data management for Apple iOS, macOS, tvOS, and iPad OS devices.

TABLE 120 CITRIX: BUSINESS OVERVIEW

COMPANY AT A GLANCE - 2019	
Founded:	1989
Headquarters:	Florida, US
No. of Employees:	8,400
Overall Annual Revenue:	USD 3,011 Million
R&D Expenditure:	USD 518 Million
Ownership:	Public (NASDAQ: CTXS)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 62 CITRIX: COMPANY SNAPSHOT

Note 1: The company's fiscal year ends on December 31

Note 2: The business revenue mix and geographic revenue mix pertain to the overall company.

Source: Company Website, Annual Reports, and SEC Filings

12.8.2 PLATFORMS AND SERVICES OFFERED

Citrix offers the following platforms in the EMM market:

TABLE 121 CITRIX: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
<ul style="list-style-type: none"> ▪ Citrix Endpoint Management ▪ XenMobile 	<p>Citrix Endpoint Management is a solution for managing endpoints, offering MDM and MAM capabilities. With Endpoint Management, companies can manage device and app policies and deliver apps to users.</p>	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ MAM ▪ UEM

Source: Company Website

12.8.3 RECENT DEVELOPMENTS

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Collaboration	August 2018	Citrix Systems and Samsung collaborated to provide a secure and easy-to-use digital workspace solution across Samsung devices	Citrix Workspace, combined with Citrix UEM, which enables customers to securely manage Samsung devices along with all their corporate-issued or BYOD.	Citrix Workspace app helped Samsung device users to access virtual apps and desktops, mobile, and SaaS apps and data securely, while seamlessly moving between mobile devices and laptops to complete tasks.

Source: Press Releases

12.9 MATRIX42

12.9.1 BUSINESS OVERVIEW

Matrix42 is a leading provider of digital workspace management solutions. In 2015, Munich-based private equity firm, EMERAM Capital Partners GmbH, acquired MATRIX42. Digital workspace management can be easily operated in the cloud, on the user's servers, or as a hybrid model. The company's Digital Workspace Experience software manages devices, applications, processes, and services in a simple, secure, and compliant manner. The software can seamlessly integrate physical, virtual, mobile, and cloud-based work environments into existing infrastructures. It also consists of the following products: Secure Unified Endpoint Management, Enterprise Service Management, and Digital Workspace Platform. The company's UEM platform has combined the benefits of modern management features of EMM and the classic management features of Client Lifecycle Management (CLM) into one solution. UEM manages all the devices, applications, and data in one central solution, and its features include software management, MDM, MAM, MCM, patch management, and OSInstaller. EMM manages all mobile and hybrid devices running Windows 10, Android, and Android for Work, iPadOS, macOS, or iOS in one central solution and one end-to-end process. It also allows users to keep private data and applications separate from critical business data. In July 2020, the company announced the acquisition of FireScope, a leader in the secure enterprise asset discovery and monitoring marketplace. With this acquisition, the company aims to become a powerful provider of secure, cloud-based digital work environments for the global workforce. This acquisition also helped the company to enter into the US market and expand opportunities for FireScope's solutions throughout the EMEA region.

12.9.2 SOLUTIONS AND SERVICES OFFERED

Matrix42 offers the following services in the EMM market:

TABLE 122 MATRIX42: SOLUTIONS OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
<ul style="list-style-type: none"> ▪ Secure Unified Endpoint Management (SUEM) ▪ Unified Endpoint Management ▪ EgoSecure Data Protection 	<p>SUEM is the intuitive tool to easily manage all devices and applications regardless of the platform, while protecting sensitive data.</p> <p>Unified Endpoint Management combines the benefits of the Modern Management features of Enterprise Mobility Management (EMM) and the Classic Management features of Client Lifecycle Management (CLM) in one solution.</p>	Integrated	<ul style="list-style-type: none"> ▪ UEM ▪ MDM ▪ Patch Management ▪ MAM ▪ MCM ▪ Software Management

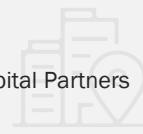
Source: Company Website

COMPANY AT A GLANCE

Founded:	1992
Headquarters:	Frankfurt, Germany
Ownership type:	Subsidiary of EMERAM Capital Partners

Note: This is a privately held company. Hence, no financial information is available in the public domain.

Source: Company Website



12.9.3 RECENT DEVELOPMENTS

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Acquisition	January 2021	Matrix42 acquired FastViewer GmbH, a leading provider of remote access, remote support, and collaboration solutions, to better support customers in the prevailing remote working trend	The long-term partner of Matrix42 is already integrated into Matrix42 products with its remote access and remote support platform for PCs, laptops, mobile devices, servers, and cloud workloads, making it the perfect addition to the existing portfolio.	With the FastViewer acquisition, the Frankfurt-based software manufacturer for digital workspace management is additionally expanding its offering for edge, IoT computing, and cloud management.
Partnership	May 2020	Matrix42 entered into a partnership with SVA System Vertrieb Alexander GmbH	This partnership is another milestone for Matrix42 toward an even stronger market penetration in the German-speaking region and to becoming the international market leader in the field of digital workspace management.	In the partnership, SVA will act independently as a vendor-neutral consultant.

Source: Press Releases

12.10 MOBILEIRON

12.10.1 BUSINESS AND FINANCIAL OVERVIEW

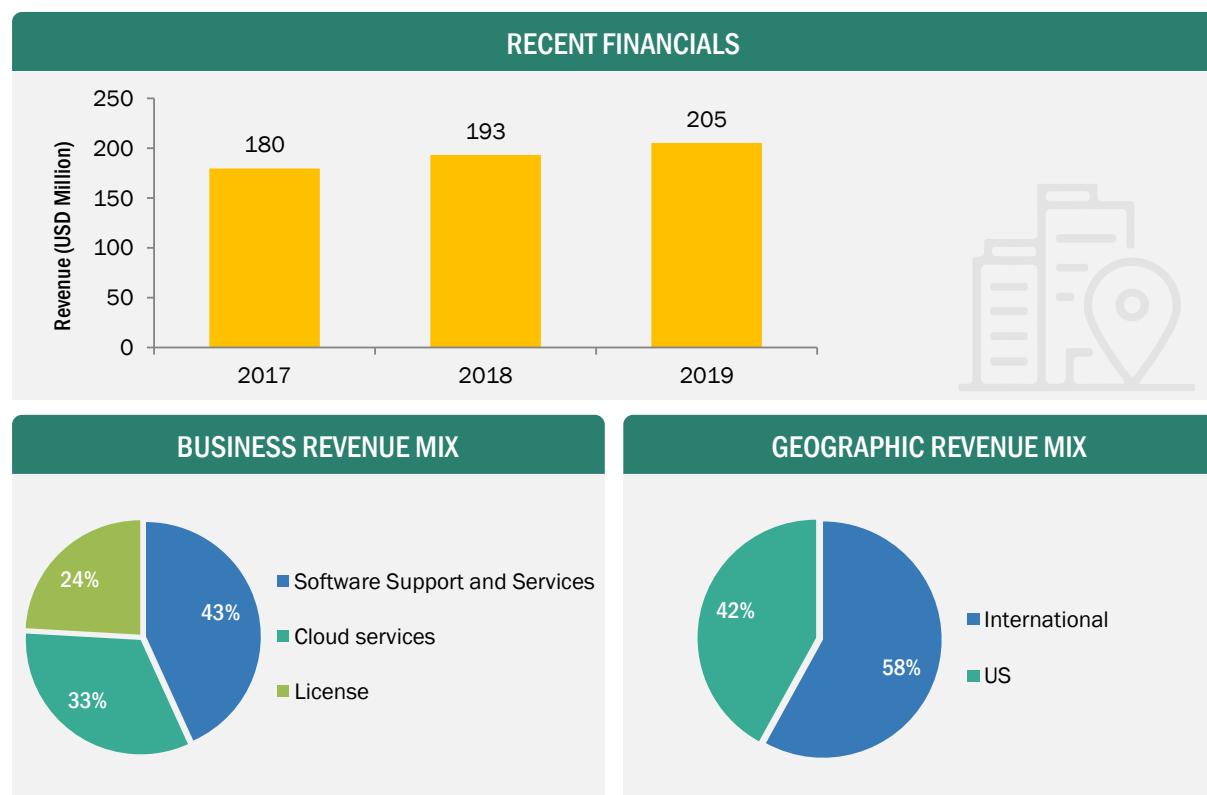
MobileIron is an established player in the zero trust space, and a leader in mobile-centric and zero trust solutions. It has redefined enterprise security with the industry's first mobile-centric, zero trust platform built on the foundation of UEM with additional zero trust capabilities, including Zero Sign-On (ZSO), Multi-Factor Authentication (MFA), and Mobile Threat Defense (MTD) to secure access and protect data across the perimeter-less enterprise. The company's zero-trust solutions can be deployed as cloud services or on-premises software. MobileIron had a global count of approximately 870 employees, as of December 2019, and is publicly listed on the Nasdaq Stock Market as NASDAQ: MOBL. This company has a significant presence in North America, Europe, and APAC.

The company's zero-trust security platform includes MobileIron UEM, MobileIron Access, MobileIron Threat Defense (MTD), and MobileIron Secure Applications for end-user productivity. In the EMM market space, the company offers MobileIron UEM, which is a comprehensive security platform that gives enterprises the fundamental visibility and IT controls needed to secure, manage, and monitor any corporate or employee-owned mobile device or desktop that accesses business-critical data. It manages and secures Mac devices alongside Android, iOS, and Windows 10 devices using a single, unified solution. This reduces the overall cost and complexity and further allows system administrators to create and enforce compliance policies across all BYOD and Carry Your Own Device (CYOD) endpoints. UEM also helps admins to validate these devices, establish user context, check app authorization, verify the network, and detect and remediate threats before granting secure access to any device or user. MobileIron UEM provides secure access to business apps, email, Wireless Fidelity (Wi-Fi), Virtual Private Network (VPN), and other productivity apps and content repositories, such as SharePoint and Box. The company offers these solutions across various verticals, including BFSI, healthcare, government, manufacturing, law and legal firms, retail, pharmaceutical, professional services, technology, and telecommunications.

TABLE 123 MOBILEIRON: BUSINESS OVERVIEW

COMPANY AT A GLANCE-2019	
Founded:	2007
Headquarters:	California, US
No. of Employees:	870
Overall Annual Revenue:	USD 205 Million
R&D Expenditure:	USD 79 Million
Ownership:	Public (NASDAQ: MOBL)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 63 MOBILEIRON: COMPANY SNAPSHOT

Note: The company's fiscal year ends on ended December 31

Note 1: Recent financials, business revenue mix, and geographic revenue mix are given for the overall company

Source: Company Website, Annual Reports, and SEC Filings

12.10.2 PLATFORMS OFFERED

MobileIron offers the following platforms in the EMM market:

TABLE 124 MOBILEIRON: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	APPLICATION
MobileIron UEM	It quickly and easily onboards devices and provides them over the air with all of the apps, settings, and security configurations needed to protect any iOS, macOS, Android, and Windows 10 endpoint across the digital workplace.	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ UEM ▪ EMM ▪ BYOD Security ▪ MAM

Source: Company Website

12.10.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Product Enhancement	April 2019	MobileIron added new capabilities to improve its workforce productivity by strengthening access to corporate applications and services	The company included new capabilities for frontline workers, thus helping them to accelerate time-to-productivity for workers on Android devices and multi-user support for Windows 10.	The other enhancements include MAM for unmanaged devices, optimized security with mobile threat detection, and expanded OS support for macOS, Android, and Windows 10 endpoints.
Acquisition	April 2020	MobileIron acquired incapptic Connect, a leader in mobile automation app release software	This acquisition helped MobileIron to accelerate the mobile app release journey for enterprise customers. Together, MobileIron and incapptic Connect made it easy to develop, publish, and update secure mobile apps.	MobileIron's UEM platform integrated with incapptic Connect software to help customers quickly develop, deploy, and secure in-house business apps, thereby resulting in increased productivity and business innovation during the COVID-19 pandemic.

Source: Press Releases

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Agreement	June 2020	Magen David Adom (MDA) implemented MobileIron's UEM platform	MDA, Israel's national EMS organization, leveraged UEM to secure devices, apps, and data used by emergency medical technicians and paramedics on the front lines of Israel's fight against coronavirus. The platform has also helped to improve the overall workforce efficiency.	With the UEM platform from MobileIron, MDA could enroll more than 200 Zebra devices in MobileIron UEM's platform, configure them with the MDA Team app, and deploy them to frontline responders in less than 24 hours. The platform has helped MDA to achieve

			comprehensive control over mobile devices, thereby helping frontline responders to increase productivity.
Partnership	April 2020	MobileIron partnered with Adeya, a privately-owned cybersecurity technology company	By combining their products, the two companies have helped many remote workers during the COVID-19 pandemic with end-to-end encrypted real-time voice and video calls, conference calls, SMS, instant messages, group chats, and file exchanges on any device. MobileIron's UEM platform helped customers to rapidly manage and deploy Adeya's end-to-end encrypted communication, collaboration, and file-sharing solution.
Partnership	April 2020	MobileIron joined forces with Teamwire	Both companies integrated their best-of-breed technologies to quickly and easily establish a foundation for secure communication with an intuitive messaging app. This has helped employees to collaborate on any mobile device, desktop, or network, increasing productivity.
Partnership	December 2018	Montagu Evans partnered with MobileIron to securely manage data on mobile devices	Without compromising on productivity, Montagu Evans was able to meet the demands of its ongoing progressive IT strategy, significantly improving its cybersecurity posture.

Collaboration	July 2019	<p>MobileIron extended the Microsoft integration with support for Microsoft Intune device compliance services</p>	<p>MobileIron extended its Microsoft Enterprise Mobility + Security (EMS) integration to support Microsoft Intune Device Compliance service for Microsoft 365 and other managed apps. The new solution enabled MobileIron's secure device management capabilities to leverage Microsoft Intune and Azure Active Directory Conditional Access to secure applications, such as Office 365.</p>	<p>This new integration allows joint customers to leverage the Intune application protection policies for their Office 365 applications while managing and securing devices with MobileIron.</p>
Agreement	June 2020	<p>Magen David Adom (MDA) implemented MobileIron's UEM platform</p>	<p>MDA, Israel's national EMS organization, leveraged UEM to secure devices, apps, and data used by emergency medical technicians and paramedics on the front lines of Israel's fight against coronavirus. The platform has also helped to improve the overall workforce efficiency.</p>	<p>With the UEM platform from MobileIron, MDA could enroll more than 200 Zebra devices in MobileIron UEM's platform, configure them with the MDA Team app, and deploy them to frontline responders in less than 24 hours. The platform has helped MDA to achieve comprehensive control over its mobile devices and thereby helping frontline responders to increase productivity.</p>

Source: Press Releases

12.11 NATIONSKY

In July 2013, Link Motion acquired NationSky. It is a leading global provider of industry-specific, cloud-based software solutions for the consumer goods, chemical, and life sciences industries. Applications offered by the company enable manufacturers to realize the benefits of a modern, cloud-based platform to manage the product journey and bring innovative, high-quality products to the market faster without compromising industry-specific functionality, quality, or regulatory compliance. These industry cloud solutions for the life sciences industry are grouped into two key product areas: Veeva Commercial Cloud and Veeva Vault.

In the EMM market, the company offers NQSky EMM. It provides cross-platform MDM, MAM, MCM, and other functions to solve the problem of a unified configuration of enterprise mobile smart terminals, device loss, data leakage, and App security access issues, documents Sharing issues, email security issues, etc. The application suite is specially designed for enterprise mobile office, covering essential applications such as application store, mail, browser, document, secure desktop, collaborative office, and instant messaging.

12.11.1 PLATFORMS AND SERVICES OFFERED

NationSky offers the following platforms in the EMM market:

TABLE 125 NATIONSKY: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	APPLICATION
NQSky EMM	NQSky EMM is an overall solution for enterprise mobile devices. It manages and guarantees the security of mobile devices, apps, and contents, establishing a complete platform for enterprise mobility.	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ MCM ▪ MAM ▪ Identity Management

Source: Company Website

NationSky offers the following services in the EMM market:

CATEGORY	SERVICE
Veeva Service	Support and Maintenance Services Customer Center Service

Source: Company Website

COMPANY AT A GLANCE

Founded: 2005
Headquarters: Beijing, China
Ownership type: Private



Note: This is a privately held company. Hence, no financial information is available in the public domain.

Source: Company Website

12.12 SNOW SOFTWARE

12.12.1 BUSINESS OVERVIEW

Snow Software is the global leader in technology intelligence solutions that are used by enterprises worldwide to optimize their software, applications, hardware, and cloud investments. The company has more than 4,000 enterprise customers worldwide, with more than 700 employees globally.

In the EMM market space, the company offers Snow, a complete EMM solution that manages the entire lifecycle of mobile devices. Snow Device Manager (SDM) is a part of the integrated Software Asset Management (SAM) platform and is available on-premises and as a SaaS solution. It presents MDM functionalities for enterprises and adds content and application management, thus making it the best-in-class EMM solution. The other key features of Snow Device Manager are data collection and inventory management, risk and compliance management, and application management. It tracks Windows, iOS, and Android phones, tablets, and laptops, active SIM-cards, apps, settings, usage, and security. It also allows or blocks access to internal resources (email, CRM, ERP, LOB, internal websites, and document shares).

The company has more than 200 security features and can be configured to alert an organization for breaches against security policies. Some of the security functions include secure email, containerized information and apps, secure network and internal access, blacklisting and whitelisting of apps, encryption, and secure browsing. The Snow Device Manager solution allows users to connect their devices to the organization's network and separates the corporate data from personal data. SDM can be integrated with Snow License Manager (SLM). This integration further allows enterprises to ensure compliance with software licensing, along with application usage and cost analytics.

12.12.2 PLATFORMS OFFERED

Snow Software offers the following platforms in the EMM market:

TABLE 126 SNOW SOFTWARE: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
Snow Device Manager	<p>It is a complete Enterprise Mobility Management solution that handles the full lifecycle of smartphones and tablets. It extends the high levels of control and oversight already applied to desktops, data centers, and cloud computing to mobile devices. It is a platform for managing software and apps across all platforms and locations, and implements smarter processes for service desks, enables information sharing between users on the move as well as configures devices and raises the bar on productivity.</p>	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ Mobile Security ▪ COPE and BYOD

Source: Company Website

COMPANY AT A GLANCE

Founded: 1997
Headquarters: Stockholm, Sweden
Ownership type: Private



Note: This is a privately held company. Hence, no financial information is available in the public domain.

Source: Company Website

12.13 SOPHOS

12.13.1 BUSINESS AND FINANCIAL OVERVIEW

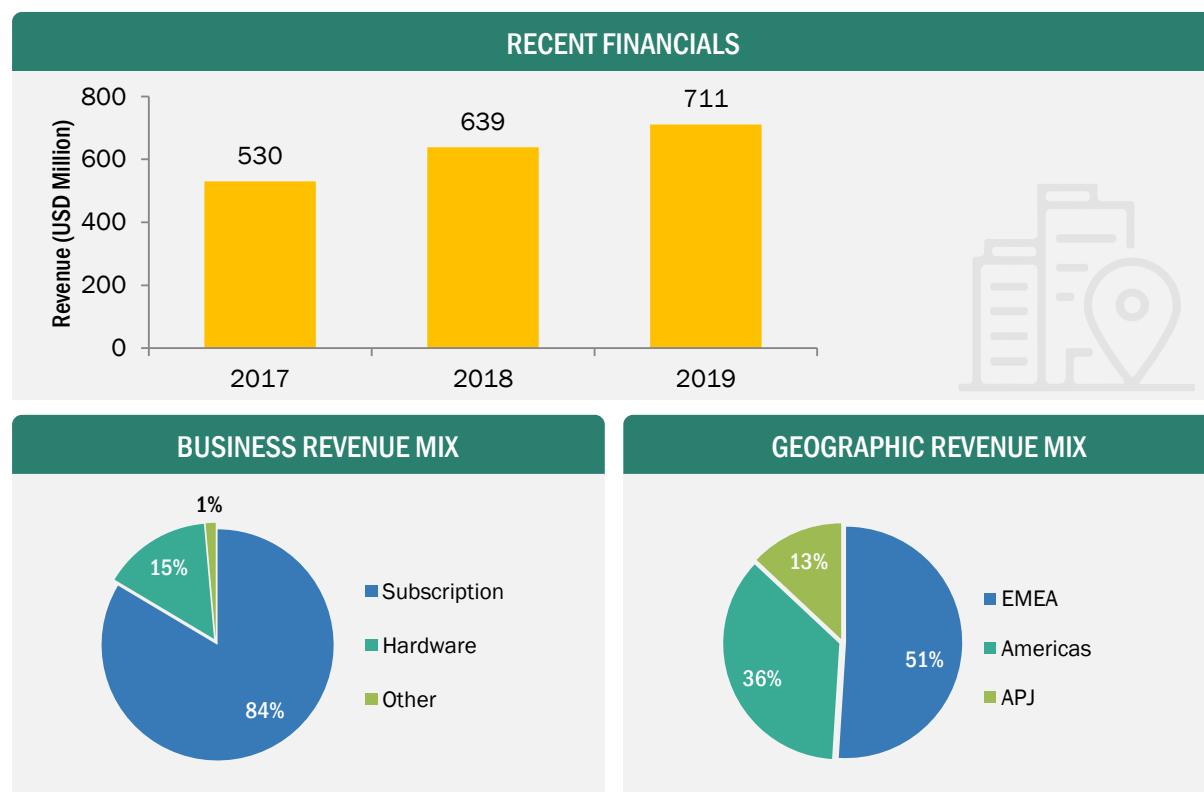
Sophos offers simplified products to combat known and unknown IT security threats. The company operates through two product heads: network security solutions and cloud-enabled end users. Most of the company's revenues are in the form of subscriptions for its network security products, whose key features are a next-generation firewall and advanced protection technology to tackle web and browser security issues. The company's geographical segments include the Americas, Europe, the Middle East and Africa, and Japan, of which it generates a majority of revenue from EMEA.

In the EMM market, the company offers Sophos Mobile. It is a secure UEM solution that helps businesses spend less time and effort to manage and secure traditional and mobile endpoints. The UEM solution that integrates natively with a leading next-gen endpoint security platform, Sophos Mobile, supports the management of Windows 10, macOS, iOS, and Android devices. The tool leverages Sophos' Mobile Encryption app, which can be centrally managed through the Sophos Mobile console. The solution also accesses content from cloud storage providers such as Dropbox, Google Drive, Microsoft OneDrive, and Egnyte.

TABLE 127 SOPHOS: BUSINESS OVERVIEW

COMPANY AT A GLANCE - 2020	
Founded:	1985
Headquarters:	Abingdon, UK
No. of Employees:	3,400
Overall Annual Revenue:	USD 711 Million
R&D Expenditure:	USD 144 Million
Ownership:	Public (LON: SOPH)

Source: Company Website, Annual Reports, and SEC Filings

FIGURE 64 SOPHOS: COMPANY SNAPSHOT

Source: Press Releases and Annual Reports

12.13.2 SOLUTIONS AND SERVICES OFFERED

Sophos offers the following solutions in the EMM market:

TABLE 128 SOPHOS: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
<ul style="list-style-type: none"> ▪ Sophos Mobile ▪ Intercept X Endpoint 	<p>Sophos Mobile is a secure Unified Endpoint Management (UEM) solution that helps businesses spend less time and effort to manage and secure traditional and mobile endpoints.</p> <p>Intercept X for Mobile protects users, their devices, and corporate data from known and never-before-seen mobile threats by leveraging Intercept X deep learning engine.</p>	Integrated	<ul style="list-style-type: none"> ▪ Customer Segmentation and Targeting ▪ Customer Experience Management ▪ Customer Lifetime Value Management

Source: Company Website

Sophos offers the following services in the EMM market:

CATEGORY	SERVICE
Services	Managed Services

Source: Company Website

12.13.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Product Enhancement	January 2020	Sophos introduced Sophos Intercept X for Mobile with new security capabilities	The new security capabilities protect users, their devices, and data from known and unknown mobile threats.	New security for Chrome OS devices and mobile threat defense for Android and iOS devices can help users from risky applications and malicious content and secure business data on mobile devices.
Integration	February 2019	Sophos Mobile Security solution integrated with Microsoft Intune	The integration allowed Microsoft Intune customers, running Sophos Mobile Security 9.0, to configure access controls fed by the latest mobile device threat information. It further helps employees to increase productivity, thus allowing them to access data securely from any device or location while maintaining corporate compliance.	Sophos offered its customers smarter MDM with Microsoft Intune integration.

Source: Press Releases

12.14 SOTI

12.14.1 BUSINESS OVERVIEW

SOTI is a leading provider of mobile and IoT management solutions with more than 17,000 enterprise customers across 174 countries depending on them to secure, manage, and support their mobile operations. Its strong partnerships with leading mobile platform providers and device manufacturers allow them to create innovative solutions that reduce the cost and complexities of business-critical mobility and IoT. The company has a global employee count of approximately 1,000 and has built a strong ecosystem of over 4,000 partners.

COMPANY AT A GLANCE	
Founded:	1995
Headquarters:	Ontario, Canada
Ownership type:	Private



Note: This is a privately held company. Hence, no financial information is available in the public domain.

Source: Company Website

In the EMM market space, the company offers SOTI ONE Platform and SOTI MobiControl. SOTI ONE is an integrated suite of mobility and IoT solutions that enables organizations to transform their outdated processes, manage the full lifecycle of their mobile and IoT devices, diagnose and troubleshoot device issues in real-time, and resolve problems in minutes. SOTI MobiControl, enables organizations to manage mobile devices and connected IoT peripherals, applications, content, and security from a single management console for centralized visibility and policy management. MobiControl supports the widest range of mobile devices (smartphones, tablets, rugged, semi-rugged, and IoT), and connected peripherals, such as printers, scanners, PCs, and laptops on multiple OS (Android, iOS and macOS, Linux, Windows, and Windows CE) for corporate-liaile, BYOD, dedicated-purpose, and IoT deployments. MobiControl offers a flexible deployment architecture, rapid provisioning, enterprise-grade content management, and a comprehensive suite of device controls, and security features. SOTI's Android Management platform supports over 95 mobile manufacturers. The features of MobiControl include geofencing, remote support, application management, and content management, among others. The lockdown mode in MobiControl helps a mobile device to the business-critical app to ensure that employees do not download rogue apps, and productivity is improved. The company offers these solutions across various verticals, such as healthcare, retail, field services, transportation and logistics, manufacturing, airlines, food and beverage, education, government, and hospitality.

12.14.2 PLATFORMS AND SERVICES OFFERED

SOTI offers the following platforms in the EMM market:

TABLE 129 SOTI: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	APPLICATION
<ul style="list-style-type: none"> ▪ SOTI ONE Platform (Integrated Suite) ▪ SOTI MobiControl 	<ul style="list-style-type: none"> ▪ SOTI ONE is an integrated suite of mobility and IoT solutions. The solution tears down mobility silos and connects everything: mobile devices, IoT endpoints, apps, and back-office systems. 	Integrated	<ul style="list-style-type: none"> ▪ MAM ▪ MCM ▪ Mobile Identity Management (MIM)

- SOTI MobiControl is an EMM solution that offers mobile device and content management. This system offers full device lifecycle management and express enrolment and provisioning based on different methods, including Linux-based devices and IoT devices.

Source: Company Website

SOTI offers the following services in the EMM market:

CATEGORY	SERVICE
SOTI Premium Service and SOTI Enterprise Service	Support Services
SOTI Professional Services	<ul style="list-style-type: none"> ▪ Consulting and Deployment Services ▪ Implementation Services ▪ Migration Services
SOTI Academy	On-demand Training Services

Source: Company Website

12.14.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Product Enhancement	October 2019	The company has updated its SOTI ONE Platform and the launched SOTI Insight, SOTI Connect, and SOTI Identity to deliver more value for customers	The new product release helps businesses eliminate functional silos, get rid of downtime, build apps faster, manage mobile, and IoT devices, as well as deliver actionable insights.	The company also added high-end scalability features using SOTI's new XTreme technology to its flagship product, SOTI MobiControl.
Business Expansion	October 2019	SOTI solutions, such as SOTI MobiControl and SOTI Assist, are available on Microsoft Azure	The company expanded its relationship with Microsoft, thereby bringing the comprehensive capabilities of Microsoft Azure to SOTI customers.	Integration with Azure enabled SOTI customers to benefit from the solution's enterprise-grade performance, security, privacy, compliance, and scalability.

Business Expansion	February 2020	SOTI increased its investments in ANZ and grew the local workforce by more than 50%	The company has experienced a strong demand within the ANZ retail sector as mobility, and the number of IoT endpoints within the retail sector has increased.	The SOTI ONE Platform provided ANZ retailers with trusted mobility and IoT management solution to ensure in-store technologies work all the time with no downtime, security, and compliance is maintained.
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Source: Press Releases

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Partnership	April 2020	SOTI partnered with TMT First by joining the Lifelines4LovedOnes' initiative to help patients affected with COVID-19 stay connected	The aim of this initiative was to provide refurbished tablets and smartphones and donate them to NHS Hospitals and Care Homes, so that patients undergoing treatment could connect with their friends and family through video calling.	SOTI supplied licenses of its flagship SOTI MobiControl, Enterprise Mobility Management (EMM) software, with zero cost, to manage the devices remotely and ensure data security and privacy is maintained.
Partnership	November 2019	Fraport AG partnered with SOTI to use the SOTI ONE Platform for managing mobile devices across businesses	Fraport AG relied on industry-leading SOTI MobiControl to help its business-critical mobility strategy take flight.	Fraport AG used SOTI MobiControl for its baggage handling so that the luggage is ready and on-time for time-sensitive passenger operations.
Partnership	October 2019	Delivery Hero, a global online food delivery leader, partnered with SOTI	SOTI One Platform helped Delivery Hero to deliver over one million meals every day.	Delivery Hero had deployed over 100,000 SOTI-controlled devices to seamlessly update mobile devices across partner restaurants within minutes.
Partnership	February 2019	Airbus partnered with SOTI to leverage its company's flagship EMM product and SOTI MobiControl	With this partnership, Airbus aims to provide public safety and first responder users with the EMM technology that is needed to integrate smart devices in mission-critical networks.	MobiControl helped first responder users prevent downtime for end users, thereby managing smart devices and applications.

Partnership	January 2019	SOTI built a partnership with Google to become a part of Google's Android Enterprise Recommended program	SOTI MobiControl became a validated solution in the Android Enterprise Recommended program.	The aim of the Android Enterprise Recommended program was to validate EMM solutions with the most comprehensive technical solutions.
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Source: Press Releases

12.15 CODEPROOF

12.15.1 BUSINESS OVERVIEW

Codeproof is an enterprise mobile security company that enables businesses to easily secure, deploy, and manage mobile applications and corporate data on company- and employee-owned (BYOD) mobile devices, including IoT. With a focus on corporate data leakage prevention through mobile end points, Codeproof offers an integrated security and mobile management platform built on top of Amazon's elastic cloud stack for maximum scalability and security. Key features of the platform include MAM, MDM, and MCM, Campus Camera blocking as well as ease of deployment for multiple device platforms, which enables businesses to quickly ramp up their security solutions and managing of all devices from a single IT-administrated cloud dashboard.

In the EMM market, the company offers a UEM platform which provides a series of robust EMM services for employee- and corporate-owned devices. Codeproof's central cloud console manages various types of business devices, including mobile phones, PCs, wearables, rugged devices, and IoT devices.

12.15.2 PLATFORMS AND SERVICES OFFERED

Codeproof offers the following platforms in the EMM market:

TABLE 130 CODEPROOF: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	APPLICATION
Codeproof UEM platform	The company's flagship offering is the cloud-based Codeproof UEM platform. The solution enables organizations to secure, deploy, and manage corporate data on company-owned and BYOD devices.	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ App Management ▪ Managed Configurations ▪ Email Management ▪ Secure Content Management

Source: Company Website

Codeproof offers the following services in the EMM market:

CATEGORY	SERVICE
Service	Support and Integration Services

Source: Company Website

COMPANY AT A GLANCE

Founded: 2011
Headquarters: Washington, US
Ownership type: Private



Note: This is a privately held company. Hence, no financial information is available in the public domain.

Source: Company Website

12.15.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Solution Provision	April 2020	Codeproof offered a custom MDM solution free for 6-months to hospitals, healthcare providers, and frontline responders in response to the COVID-19 pandemic	Codeproof's solution offers a suite of custom features for healthcare providers to securely access business apps, business data, and sensitive health information needed to perform their jobs efficiently within regulatory bounds at scale.	These features include, among others, productivity tools, data encryption, location tracking, and security alerts.
Solution Launch	October 2020	Codeproof launched Remote Worker MDM for Laptops, Desktops, and PCs, an MDM solution for IT administrators to secure, deploy, and manage Windows endpoints for a modern workforce	The Codeproof team worked closely with Microsoft to develop an easy-to-use cloud-based desktop management software platform.	Remote Worker MDM for Laptops, Desktops, and PC offers a range of features such as command center, policy configuration options, Network Proxy configuration options, Kiosk management, computer usage management, WiFi management, VPN management, certificate management, visual customization, location tracking, and reporting.

Source: Press Releases

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Partnership	May 2020	Codeproof announced that it is now a T-Mobile Sell With partner	Codeproof will be listed and promoted internally to T-Mobile's sales managers to be resold to clients as a value-added service.	This will lead to a large increase in the company's footprint and allow it to reach a greater variety of SMBs in various industries.

Partnership	June 2019	Codeproof announced a strategic business collaboration with Wireless Business Consultants (WBC), a Sprint Telecommunications Master Agent	The collaboration brings together Codeproof Technologies' EMM software platform and the vast B2B sales reach of WBC, enabling top-notch MDM capabilities to Sprint business customers nationwide.	With a proven track record of exceeding expectations, the collaboration with WBC will allow Codeproof to extend its advanced MDM solutions to a growing nationwide business market segment.
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Source: Press Releases

12.16 NETPLUS MOBILITY

12.16.1 BUSINESS OVERVIEW

NetPlus Mobility is part of Ventraq Corporation. It is a leading communications management solutions provider for both commercial and government entities. The company offers a suite of solutions for enterprise mobility management, expense management, data validation, fault management, inventory tracking and control, provisioning, and more. In April 2016, NetPlus Mobility completed the acquisition of Amtel, a leading software provider of an integrated SaaS solution for enterprise mobility and expense management.

In the EMM market, the company offers Amtel by NetPlus Mobility, an easy-to-implement SaaS platform. It enables companies to secure and control corporate data on mobile devices. It also helps employees confidently share content with BYOD workers and reduce risks of device or data loss. Amtel focuses on reducing mobile expenses for clients while also improving an enterprise's return on investments for its mobile solutions. By leveraging real-time visibility into usage information and proactively taking action to eliminate overages and penalties, Amtel's solution helps users control mobile communications expenses while also securing mobile devices and endpoints.

12.16.2 PLATFORMS AND SERVICES OFFERED

NetPlus Mobility offers the following platforms in the EMM market:

TABLE 131 NETPLUS MOBILITY: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
Amtel by NetPlus Mobility	Amtel by NetPlus Mobility is a SaaS-based enterprise mobility management platform that combines mobile device management, app management, and expense management.	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ MAM ▪ Telecom Expense Management

Source: Company Website

NetPlus Mobility offers the following services in the EMM market:

CATEGORY	SERVICE
Services	Customer Support

Source: Company Website

COMPANY AT A GLANCE

Founded: 2005
Headquarters: Maryland, US
Ownership type: Private



Note: This is a privately held company. Hence, no financial information is available in the public domain.

Source: Company Website

12.17 HEXNODE

12.17.1 BUSINESS OVERVIEW

Hexnode is an enterprise division of MITSOGO Technologies conceived for delivering innovative products and solutions for enterprises. It delivers a simple, easy-to-configure EMM solution to manage the entire fleet of mobile devices for organizations. Hexnode MDM is a UEM solution that manages devices across multiple platforms from a single console. It enables companies to access BYOD and enterprise mobility in the business without compromising security. The company offers a variety of MDM tools for today's increasingly mobile, modern teams. These include endpoint management for all types of devices (including iOS, Android, Windows, macOS, and tvOS), an intuitive dashboard for greater visibility and control over mobile devices across the enterprise, web filtering for security, location tracking, and more.

In the EMM market, the company offers G Suite EMM. Seamless integration of G Suite with Hexnode MDM unlocks easy enrollment with Android Enterprise and a plethora of cloud-based tools, services, and applications. It enables enterprises to ensure higher standards of user productivity with zero sacrifice to device security.

12.17.2 SOLUTIONS AND SERVICES OFFERED

Hexnode offers the following solutions in the EMM market:

TABLE 132 HEXNODE: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
G Suite EMM	G Suite enables enterprises to ensure higher standards of user productivity with zero sacrifice to device security.	Integrated	<ul style="list-style-type: none"> ▪ Device Management ▪ Application Management ▪ Security Management ▪ Content Management ▪ Expense Management ▪ BYOD Management ▪ Kiosk Management

Source: Company Website

COMPANY AT A GLANCE

Founded: 2013
 Headquarters: California, US
 Ownership type: Private



Note: This is a privately held company. Hence, no financial information is available in the public domain.

Source: Company Website

12.17.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Program Launch	July 2020	Hexnode announced the launch of its commission-based affiliate program to increase UEM adoption across multiple industries and extend the reach of Hexnode products	With the new affiliate program, small to medium businesses, independent software vendors, industry influencers, bloggers, website owners, trade associations, self-employed entrepreneurs, and professional and individual affiliate marketers can earn a commission from referrals or sales of Hexnode products.	Currently, Hexnode offers a 15% commission for every sale brought in by an affiliate partner.
Integration	May 2020	Hexnode announced incorporating new integration with Okta, a popular cloud-based Identity and Access Management (IAM) solution	The integration adds more flexibility to the solution in the area of identity and access management functionalities.	With this integration, admins can sync their Okta directories to Hexnode for allowing secure, seamless access to the Hexnode portal.
Integration	November 2018	Hexnode integrates with G Suite for efficient device enrollment	G Suite is a cloud-based platform for enterprise document management and security.	G Suite ensures data security, easy device management, and rapid distribution of work apps. It enables easy deployment of both BYOD and corporate-owned devices via Android in the Enterprise program.
New Product Launch	January 2018	Hexnode MDM announced the release of its newest solution for Mobile Expense Management	The solution is designed to help enterprises to keep track of data usage and manage it efficiently.	This solution enables companies with efficient control and management of data expenses, which help improve productivity.

Source: Press Releases

12.18 MANAGEENGINE

12.18.1 BUSINESS OVERVIEW

ManageEngine is the Enterprise IT Management Software division of ZOHO Corp. Founded in 1996 and known until 2009 as AdventNet Inc., the Corporate office of ZOHO Corp. is located in California, US, with offices in North America, Europe, and Asia. ZOHO Corp. is privately held. ManageEngine is an innovative producer of enterprise IT management software, offering high-end functionality of large network management frameworks at cost-effective prices to enterprises worldwide. ManageEngine has offices worldwide, including the US, the Netherlands, India, the UAE, Mexico, Singapore, Japan, China, and Australia.

COMPANY AT A GLANCE

Founded: 1996
 Headquarters: California, US
 Ownership type: Private



Note: This is a privately held company. Hence no financial information is available in the public domain

Source: Company Website

In the EMM market, the company offers Mobile Device Manager Plus. It enables companies to secure and manage the enterprises' mobile fleet from a single point. Moreover, Desktop Central is a network-neutral solution that can be used to manage desktops in Active Directory, Workgroups, or other directory services-based networks such as Novell(R) eDirectory. It can manage computers in multiple domains and computers across WAN (branch offices), while keeping a check on bandwidth.

12.18.2 SOLUTIONS AND SERVICES OFFERED

ManageEngine offers the following solutions in the EMM market:

TABLE 133 MANAGEENGINE: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
ManageEngine Mobile Device Manager Plus MSP	<p>It is an enterprise-grade enterprise mobility management solution. It can enroll and authenticate corporate and BYOD devices and configure unique profiles for each device type for WiFi, VPNs, and more. The solution detects and reports high-risk or non-compliant devices and safeguards networks with role-based and device-based usage permissions.</p>	Integrated	<ul style="list-style-type: none"> ▪ Mobile app management ▪ BYOD ▪ Mobile Security Management ▪ Asset Management ▪ OS Update Management ▪ Secure Content Distribution ▪ Mobile Email Management ▪ Containerization ▪ Remotely troubleshoot devices ▪ Kiosk mode ▪ Enroll Mobile Devices

Source: Company Website

ManageEngine offers the following services in the EMM market:

CATEGORY	SERVICE
Services	<ul style="list-style-type: none"> ▪ Technical Assistance Services ▪ Support Services

Source: Company Website

12.18.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Solution Enhancement	September 2020	ManageEngine announced that ADSelfService Plus now supports multi-factor authentication (MFA) for VPNs to protect organizations' internal networks from unauthorized access	ADSelfService Plus is an integrated Active Directory (AD) self-service password management and single sign-on (SSO) solution.	By adding an extra authentication step, ADSelfService Plus makes it extremely difficult for attackers who depend on password cracking or compromised credentials to gain access to the network resources.
Solution Enhancement	December 2019	ManageEngine announced that ADSelfService Plus offers Endpoint Multi-factor Authentication (MFA) for Linux logins	The new feature supplements Windows and macOS MFA support, making ADSelfService Plus the industry's on-premises solution to provide endpoint MFA for all three major operating systems.	IT admins can improve user account security and keep sophisticated cyber threats at bay.
Business Expansion	November 2019	ManageEngine announced that its cloud-based IT management applications are being hosted in two Australian data centers recently launched by its parent company, ZOHO	Organizations in Australia and New Zealand have access to ManageEngine solutions provided entirely from ISO 27001-certified, SOC 1 Type II, SOC 2 Type II, and PCI-DSS compliant data centers in Melbourne and Sydney.	This helps IT teams in the region to migrate operations seamlessly to the cloud while adhering to Australian data privacy laws and security standards.

Solution Enhancement	February 2018	ManageEngine announced that it is strengthening its endpoint management offering by bringing Patch Manager Plus to the cloud	Patch Manager Plus on Cloud enables admins to automate the entire patch management process, from patch detection to deployment, without any infrastructure investment, thereby securing devices from multiple vulnerabilities and cyberattacks at less than a dollar per computer per month.
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Source: Press Releases

12.19 MIRADORE

12.19.1 BUSINESS OVERVIEW

Miradore is a specialized software company providing easy-to-use, cloud-based solutions for managing IT and mobile devices efficiently. The company aims to help IT service providers and IT departments secure and control IT devices, while dramatically cutting costs and creating value-added IT automation.

With Miradore Online Mobile Device Management (MDM), Enterprise Mobility Management (EMM), and Unified Endpoint Management (UEM), companies can easily and cost-efficiently achieve security and compliance and increase the productivity of device users by ensuring device functionality over-the-air. With these solutions, companies can secure and manage all of the organization's devices from a single portal. Miradore's software also allows for automation, furthering organizational efficiency, reducing errors, and helping companies scale and grow their business. Moreover, Miradore Management Suite is an on-premise device management software for desktops, laptops, and servers. It supports Windows, macOS, and Linux, and is especially suitable for larger enterprises and IT service providers. In Miradore Management Suite, the management processes for different hardware and software platforms have been seamlessly integrated as one, unified management solution.

COMPANY AT A GLANCE

Founded:	2006
Headquarters:	Lappeenranta, Finland
Ownership type:	Private



Note: This is a privately held company. Hence, no financial information is available in the public domain.

Source: Company Website

12.19.2 SOLUTIONS AND SERVICES OFFERED

Miradore offers the following solutions in the EMM market:

TABLE 134 MIRADORE: SOLUTION OFFERED

PRODUCT/SOLUTION	DESCRIPTION	PRODUCT TYPE	SOLUTION
<ul style="list-style-type: none"> ▪ Miradore Management Suite ▪ Miradore Online 	<p>Miradore Management Suite is an on-premise device management software for desktops, laptops, and servers. It supports Windows, macOS, and Linux, and is especially suitable for larger enterprises and IT service providers.</p> <p>Miradore Online is a free-of-charge mobile device management platform that features security, control, automation, and has multitenancy capabilities.</p>	Integrated	<ul style="list-style-type: none"> ▪ MDM ▪ UEM ▪ BYOD

Source: Company Website

Miradore offers the following services in the EMM market:

CATEGORY	SERVICE
Services	<ul style="list-style-type: none"> ▪ Maintenance Service ▪ Setup Service ▪ Integration Service ▪ Scripting Service ▪ Package Building Service ▪ Training ▪ Health Check Service

Source: Company Website

12.19.3 RECENT DEVELOPMENTS

The company's organic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Acquisition	October 2020	Standout Capital acquired Miradore for an undisclosed amount	Standout Capital is a Stockholm-based private equity firm investing in growing Nordic tech companies.	Together with one of Nordic's largest growth capital investors, Miradore will increase investments in organic growth outside Finland as well as pursue selective acquisition opportunities.
Product Launch	August 2020	Miradore released FileVault disk encryption for macOS devices	FileVault performs on-the-fly encryption of the system disk of macOS devices, and IT admins can enforce it remotely using a configuration profile.	There is also a dashboard widget that shows the FileVault status of managed macOS devices.
Solution Enhancement	February 2020	Miradore extended software distribution capabilities of the UEM solution	IT administrators can now more easily install applications to multiple devices remotely, enabling them to get the software into the hands of device users and giving employees easier access to important apps.	This strengthens the existing app management capabilities for Windows and macOS.

Solution Enhancement	November 2019	Miradore is able to scan and install all missing security patches on Windows devices	This is a significant upgrade to Miradore and takes Windows management capabilities to the next level, furthering the commitment to offer customers full UEM.	Miradore reduces these complexities because it automates the process. It is 100% cloud-based and a lightweight solution.
Solution Enhancement	February 2019	Miradore is carrying out the company's mission of providing seamless UEM to its customers	Miradore will deliver easy, cost-efficient, and centralized device management from the cloud.	The unified platform will manage not only smartphones, tablets, and PCs, but also AR, VR, IoT devices, and wearables, which are making inroads into the digital workplace.

Source: Press Releases

The company's inorganic growth strategies are as follows:

NATURE OF DEVELOPMENT	MONTH AND YEAR	BRIEF OUTLINE	DESCRIPTION	ADDITIONAL COMMENTS
Partnership	June 2018	Miradore entered into an alliance with Hutchison Drei Austria, a mobile communications provider for consumers and businesses, to implement MDM/EMM	With Miradore, the company is able to provide zero-touch setup services, such as Apple DEP for iOS devices, and offer mobile data traffic routing in their network without customers having to rely on a VPN.	Drei's business customers can now more seamlessly enable BYOD or COPE programs for their employees.

Source: Press Releases

12.20 QUEST SOFTWARE

Founded	1987
Headquarters	California, US
Ownership	Private
Business Overview	<p>Quest Software is a global systems management and security software provider. The company provides software solutions for the rapidly changing world of enterprise IT that help simplify the challenges caused by data explosion, cloud expansion, hybrid data centers, security threats, and regulatory requirements. Its product portfolio includes database management, data protection, IAM, Microsoft platform management, and UEM. The KACE Cloud Mobile Device Manager provides IT admins with the visibility and control they need to easily enroll mobile devices, build a comprehensive inventory, systemically manage and configure devices, and secure their business resources, regardless of device ownership. Some of the features include automation of policy and process management, app store enablement, UEM, modernize mobile device management, simplified device deployment, and location tracking. KACE Cloud MDM can be seamlessly integrated with the KACE Systems Management Appliance (SMA) to streamline the organization's transition to UEM and gain comprehensive visibility and control over its traditional and mobile devices through a single interface. The company serves 130,000 companies globally across 100 countries, including 95% of the Fortune 500 and 90% of the Global 1000.</p>
Products Offered	<ul style="list-style-type: none"> ▪ Unified Endpoint Management ▪ KACE Cloud Mobile Device Manager
Geographic Presence	Americas, EMEA, APAC

Source: Company Website

12.21 IVANTI

Founded	2017
Headquarters	Utah, US
Ownership	Private
Business Overview	<p>Ivanti is a privately held company, which was founded in 2017, when two companies LANDesk and HEAT Software combined. After the formation of Ivanti, the company added several acquisitions to its portfolio, including Concorde Solutions and RES Software, for asset management and identity and automation. In the EMM market space, the company offers Avalanche, an enterprise mobility management platform that helps enterprises manage all mobile devices and applications in one place, taking full control over company-owned devices. Many customers trust Avalanche as their EMM throughout the supply chain and retail mobile deployments. It provides centralized remote control and troubleshooting, thus keeping workers productive. In June 2020, the company added new EMM capabilities to the Ivanti Avalanche Enterprise Enabler, allowing supply chain organizations to quickly provision hundreds of fully managed Android devices to leverage a Near-Field Communications (NFC) bump or quick response (QR) code deployment.</p>
	<p>Ivanti Unified Endpoint Manager, powered by Landes, was formerly known as LDMS. It helps enterprises to improve user and IT productivity by helping IT admins to gather detailed device data, automate software and OS deployments, and quickly fix user issues. With Ivanti Unified Endpoint Manager, enterprises can manage various endpoints and OS, including:</p> <ul style="list-style-type: none"> ▪ PC/Server: Windows, macOS, Linux, Unix, and Chromebooks ▪ Mobile devices: iOS and Android ▪ IoT: tvOS and Raspbian
Products Offered	<ul style="list-style-type: none"> ▪ Unified Endpoint Manager ▪ Enterprise Mobility Management ▪ Avalanche
Geographic Presence	North America, EMEA, APAC, and Latin America

Source: Company Website

12.22 SOCIAL MOBILE

Founded	2011
Headquarters	Florida, US
Ownership	Private

Business Overview

Social Mobile is a vertically integrated OEM that specializes in designing customizable and scalable Android-powered smart solutions for the enterprise market. The company designs, develops, and deploys turnkey solutions that enable its clients to bring mobile devices to the market quickly and efficiently. Enterprises, mobile operators, national retailers, hospitality institutions, distributors, governments, and educational institutions have partnered with Social Mobile to bring their product from concept to market. It is also a Google Mobile Services (GMS) Partner, Authorized Android zero-touch OEM, Android enterprise partner, and Approved Android EMM Partner.

In the EMM market, the company offers Mambo. It is an EMM platform designed exclusively to service the Android enterprise ecosystem. Mambo is an Android-approved EMM partner that offers zero-day support for new releases. It provides clients the ability to manage and control the data security of mobile devices. Mambo was built to fulfill the requirement of a simple, easy-to-use EMM, perfect for clients looking for a straightforward solution to managing their fleet of mobile devices.

Solutions Offered	Mambo Platform
Geographic Presence	North America and APAC
Industry Vertical	Government, Education, Hospitality, Transportation and Logistics, Telecoms, Food and Beverages, Insurance, Defense Healthcare, and Retail

Source: Company Website

12.23 JAMF

Founded	2002
Headquarters	Minnesota, US
Ownership	Private

Jamf was formed to provide a better technology management solution for hundreds of Macs on the University of Wisconsin, Eau Claire (UWEC) campus. The company is committed to enabling IT to empower end users and bring legendary Apple experience to businesses, education institutions, and government organizations via its extensive product portfolio that includes Jamf Connect, Jamf Protect, Jamf Pro, Jamf Now, and Jamf School software. The company has more than 38,500 global enterprise customers and manages over 16 million Apple devices worldwide. The company has more than 1,000 full-time employees situated in 10 different countries.

Business Overview
 Jamf Pro, formerly known as Casper Suite, is the Apple EMM tool that manages and protects iPads, iPhones, Apple TV, and Mac devices from anywhere. It allows IT to deploy configuration profiles, assign apps, and send remote commands, such as lock, wipe, and activate Lost Mode. Jamf Pro installs the Jamf Agent to improve device management for macOS. It allows enterprises to execute system-level tasks, such as running scripts and installing packages. Jamf Pro is available in the cloud or on-premises. This EMM solution offers MDM, MAM, Mobile Identity and Access Management (MIAM), and MCM.

Jamf Now, formerly known as Bushel, is a cloud-based MDM solution for the iPad, iPhone, and Mac devices in the workplace. It allows small businesses to perform MDM tasks on Apple devices within the organization. JamfSchool is an MDM solution for schools that gives them the ability to easily deploy and manage Apple devices so that teachers can focus on teaching students. Jamf Protect is exclusively developed for macOS and provides a complete solution to maintain endpoint compliance and provides full visibility into events on devices, even if offline or remote.

Solution Offered	<ul style="list-style-type: none"> ▪ Jamf Pro ▪ Jamf Now ▪ Jamf Protect ▪ Jamf School
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Geographic Presence	North America, Europe, and APAC
---------------------	---------------------------------

Source: Company Website

12.24 42GEARS MOBILITY SYSTEMS

Founded	2009
Headquarters	Bengaluru, India
Ownership	Private

42Gears Mobility Systems is a pioneer provider of UEM, offering Software as a Service (SaaS) and on-premises solutions to secure, monitor, and manage all business endpoints, such as tablets, phones, desktops, and wearables. The product portfolio of the company supports company-owned as well as employee-owned devices built on Android, iOS, Windows, Linux, and ChromeOS platforms. Its UEM solution helps the IT staff to take a consistent and holistic approach toward endpoint management using a single device. UEM caters to all endpoints of digital workspaces, such as BYO devices, IoT devices, sensors and gateways, desktops/laptops, ruggedized devices, wearables, mobile and cloud apps, kiosks, and printers.

Business Overview

The company offers EMM solutions via its flagship product, SureMDM, specifically designed for SMEs. SureMDM, powered by 42Gears UEM, is an intuitive and powerful UEM tool that offers a range of features, including device enrollment, device provisioning, device grouping, device health monitoring, location tracking, and device security for Android, iOS, Windows, Linux, and macOS platforms. It has incorporated all aspects of enterprise mobility through UEM, including MAM, MDM, and MCM. SureMDM allows enterprises to have full control of the business applications and data being accessed through mobile devices, as per their security policies, and third-party compliance requirements.

The company is trusted by 10,000+ customers in more than 115 countries and caters to various verticals, such as transportation, entertainment, finance, logistics, healthcare, education, and hospitality. It has a local as well as an international customer base, which includes Pepsi, Lufthansa, Datalogic, Toyota, AT&T, Siemens, and Canon. The company has a global reach and offices in the UK, the US, and India.

The COVID-19 outbreak led to 42Gears partnering with Isansys to make remote management of advanced patient monitoring devices possible through SureMDM. The solution helped IT teams in healthcare institutions ensure that the enrolled devices are used for intended purposes only and all Advanced Patient Monitoring (APM) devices are policy compliant.

Products Offered	<ul style="list-style-type: none"> ▪ SureMDM ▪ UEM
Geographic Presence	North America, Europe, and APAC

Source: Company Website

12.25 SCALEFUSION

Founded	2015
Headquarters	Pune, India
Ownership	Private
Business Overview	<p>ProMobi Technologies provides a leading EMM Solutions under the Scalefusion brand. Scalefusion enables organizations to secure and manage endpoints, including smartphones, tablets, laptops, rugged devices, mPOS, and digital signages, along with apps and content. It supports the management of Android, iOS, macOS, and Windows 10 devices and ensures streamlined device management operations with Scalefusion InterOps.</p> <p>In the EMM market, the company offers Scalefusion EMM Software. It enables an organization to implement a perimeter-less mobility strategy by providing one platform to manage and secure endpoints, enterprise communications suite, and a set of capabilities to streamline device management operations.</p>
Solution Offered	Scalefusion EMM
Geographic Presence	North America, APAC, and Europe
Industry Vertical	Transportation and Logistics, Retail, Education, Healthcare, Manufacturing, Construction and Real Estate, Hospitality, Software and Telecom, Financial Services, and Others

Source: Company Website

12.26 APPTEC

Founded	2011
Headquarters	Basel, Switzerland
Ownership	Private

Business Overview

AppTec is a pioneer in the field of UEM and mobile security solutions. The company offers a complete solution for MDM through its flagship platform, APPTEC360 EMM. The AppTec360 EMM platform is a comprehensive IT control solution created to meet the need of complex mobility-IT demands and is designed to offer the highest security standard for managing mobile devices used by corporations on all mobile OS (iOS, Android, Windows). It gives the IT staff full control over data, apps, and devices via an easily operated interface. APPTEC360 EMM offers MDM, MAM, MCM, or excellent user experience. With the adoption of EMM, data from all the mobile devices is visible in one single overview. AppTec MDM Software supports all common OS (iOS, Android and Windows Mobile), automatically configures emails, Wi-Fi, VPN, and settings. Based on the data protection guidelines, the company separates personal data and enterprise-critical data and allows the encryption of emails, calendars, and contacts. MAM secures apps on mobile devices, thus allowing the installation, de-installation, and complete control over apps, during the entire lifecycle. APPTEC ContentBox integrates seamlessly into the existing IT infrastructure and secures sensitive data on the external cloud-services. It allows IT admins to take control over confidential data. APPTEC360 EMM platform is used by more than 6,400 companies and organizations in 107 countries, thereby helping organizations to manage applications, documents, configurations, and security on mobile devices and desktops.

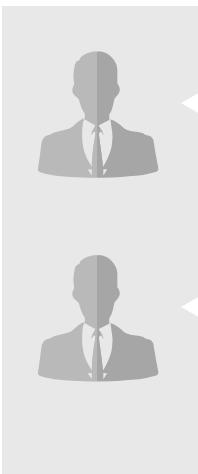
Products Offered	<ul style="list-style-type: none"> APPTEC360 EMM Suite ▪ MDM ▪ MAM ▪ MCM ▪ BYOD
------------------	--

Geographic Presence	North America and Europe
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Source: Company Website

13 APPENDIX

13.1 INDUSTRY EXPERTS



“Content will be everywhere and in everything, but Mobile Content Management will be increasingly invisible.”

– Industry Expert

“An EMM solution with robust monitoring and reporting tools enables the management to access configurable dashboards that provide real-time status of operational flows, cost, and revenue data, and enables on-the-fly adjustments to staffing assignments.”

– Industry Expert

Source: *Industry Experts*

13.2 DISCUSSION GUIDE

Discovering a market is all about identifying opportunities in unrecognized and unexploited gaps that are worth pursuing. In most cases, these markets are not apparent or conventional. Discovering a product, unlike the markets, is quite different and significantly depends on its value and usability. We want to understand and discuss how your company is investing in discovering smart markets and smarter products to stay ahead of the curve.

Currently, we are conducting a global study on the EMM market, with a focus on current trends and technology adoption. The report would provide a comprehensive market and forecast analysis of the overall market and its submarkets. It also features a detailed analysis of opportunities, market drivers, restraints, roadmaps, competitive landscape, and profiles of key industry players.

Name
Designation
Company Name
Email ID
Mobile No.
Phone No
Fax No.

Q. 1. According to you, would the COVID-19 pandemic have an impact on the EMM market in the future? Please select from the options given below.

SR. NO.	YES	NO
1		

Primary's Viewpoint: _____

Q. 2. According to you, how would the COVID-19 pandemic impact the EMM market? Please select from the options provided below.

SR. NO.	POSITIVE IMPACT	NO IMPACT	NEGATIVE IMPACT
1			

Primary's Viewpoint: _____

Q. 3. Please brief us about the solution and service offerings of your company in the EMM market.

SR. NO.	PRODUCT/SOLUTION	DESCRIPTION
1		
2		
3		
4		
5		

Primary's Viewpoint: _____

Q. 4. According to you, what does the EMM market look like today in terms of opportunities, competitive landscape, and challenges, and where is it heading, i.e., how will the market shape in the next five years from now?

SR. NO.	TODAY	AFTER FIVE YEARS
1		
2		
3		

Primary's Viewpoint: _____

Q. 5. What could be major drivers, restraints, opportunities, and challenges in the EMM market?

SR. NO.	DRIVERS	RESTRAINTS	OPPORTUNITIES	CHALLENGES
1				
2				
3				

Primary's Viewpoint: _____

Q. 6. We have segmented the EMM market based on components, so according to you,

- Which component is the highest revenue contributor for 2020? Please rank on a scale of 1 – 2 (1 being the highest).
- How do you think will it grow in the next five years (2026)? Please rank on a scale of 1 – 2 (1 being the highest).

SR. NO.	EMM MARKET - BY COMPONENT	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 2, 1 BEING THE HIGHEST) – 2020	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 2, 1 BEING THE HIGHEST) – 2026
1	Solutions		
2	Services		

Note - Please mention any overlapping segments or technologies that you perceive are not relevant for the given market.

Primary's Viewpoint: _____

Q. 7. We have segmented the EMM market based on solutions, so according to you,

- Which application is the highest revenue contributor for 2020? Please rank on a scale of 1 – 5 (1 being the highest).
- How do you think will it grow in the next five years (2026)? Please rank on a scale of 1 – 5 (1 being the highest).

SR. NO.	EMM MARKET - BY SOLUTION	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 5, 1 BEING THE HIGHEST) – 2020	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 5, 1 BEING THE HIGHEST) – 2026
1	MDM		
2	MAM		
3	MCM		
4	Mobile Expense Management		
5	Identity and Access Management		

Note - Please mention in case of any overlapping segments or technologies that you perceive are not relevant for the given market.

Q. 8. We have segmented the EMM market based on services, so according to you,

- Which service segment is the highest revenue contributor for 2020? Please rank on a scale of 1 – 2 (1 being the highest).
- How do you think will it grow in the next five years (2026)? Please rank on a scale of 1 – 2 (1 being the highest).

SR. NO.	EMM MARKET - BY SERVICE	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 2, 1 BEING THE HIGHEST) – 2020	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 2, 1 BEING THE HIGHEST) – 2026
1	Professional Services		
2	Managed Services		

Note - Please mention any overlapping segments or technologies that you perceive are not relevant for the given market.

Primary's Viewpoint: _____

Q. 9. We have segmented the EMM market based on professional services, so according to you,

- Which professional service segment is the highest revenue contributor for 2020? Please rank on a scale of 1 – 3 (1 being the highest).
- How do you think will it grow in the next five years (2026)? Please rank on a scale of 1 – 3 (1 being the highest).

SR. NO.	EMM MARKET - BY PROFESSIONAL SERVICES	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 3, 1 BEING THE HIGHEST) – 2020	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 3, 1 BEING THE HIGHEST) – 2026
1	Consulting		
2	Support and Maintenance		
3	Deployment and Integration		

Note - Please mention in case of any overlapping segments or technologies that you perceive are not relevant for the given market.

Primary's Viewpoint: _____

Q. 10. We have segmented the EMM market based on organization size, so according to you

- Which organization size is the highest revenue contributor for 2020? Please rank on a scale of 1 – 2 (1 being the highest).
- How do you think will it grow in the next five years (2026)? Please rank on a scale of 1 – 2 (1 being the highest).

SR. NO.	EMM MARKET - BY ORGANIZATION SIZE	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 2, 1 BEING THE HIGHEST) – 2020	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 2, 1 BEING THE HIGHEST) – 2026
1	Large Enterprises		
2	Small and Medium-Sized Enterprises (SMEs)		

Note - Please mention any overlapping segments or technologies that you perceive are not relevant for the given market.

Primary's Viewpoint: _____

Q. 11. We have segmented the EMM market based on deployment modes, so according to you,

- Which deployment mode is the highest revenue contributor for 2020? Please rank on a scale of 1 – 2 (1 being the highest).
- How do you think will it grow in the next five years (2026)? Please rank on a scale of 1 – 2 (1 being the highest).

SR. NO.	EMM MARKET - BY DEPLOYMENT MODE	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 2, 1 BEING THE HIGHEST) – 2020	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 2, 1 BEING THE HIGHEST) – 2026
1	On-premises		
2	Cloud		

Note - Please mention any overlapping segments or technologies that you perceive are not relevant for the given market.

Primary's Viewpoint: _____

Q. 12. We have segmented the EMM market based on verticals, so according to you,

- Which vertical is the highest revenue contributor for 2020? Please rank on a scale of 1 – 9 (1 being the highest).
- How do you think will it grow in the next five years (2026)? Please rank on a scale of 1 – 9 (1 being the highest).

SR. NO.	EMM MARKET - BY VERTICAL	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 9, 1 BEING THE HIGHEST) – 2020	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 9, 1 BEING THE HIGHEST) – 2026
1	BFSI		
2	Retail and E-commerce		
3	Healthcare and Life Sciences		
4	IT and Telecom		
5	Manufacturing		
6	Government		
7	Transportation and Logistics		
8	Travel and Hospitality		
9	Other Verticals (media and entertainment, energy and utilities, and education)		

Note - Please mention in case of any overlapping segments or technologies that you perceive are not relevant for the given market.

Primary's Viewpoint: _____

Q. 13. Which region, according to you, is the largest in terms of opportunities in the EMM market and is expected to be the largest in the future? Kindly give points on a scale of 1-5, with 1 being the largest market.

- Which region is the highest revenue contributor for 2020? Please rank on a scale of 1 – 5 (1 being the highest).
- How do you think will it grow in the next five years (2026)? Please rank on a scale of 1 – 5 (1 being the highest).

SR. NO.	EMM MARKET - BY REGION	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 5, 1 BEING THE HIGHEST) - 2020	ATTRACTIVENESS OF OPPORTUNITY (SCALE OF 1 – 5, 1 BEING THE HIGHEST) - 2026
1	North America		
2	Asia Pacific (APAC)		
3	Europe		
4	Latin America		
5	Middle East and Africa (MEA)		

Note - Please mention any overlapping segments or technologies that you perceive are not relevant for the given market.

Primary's Viewpoint: _____

Q. 14. Which five companies do you see as fierce competitors with respect to your company in the EMM market?

INSTRUCTIONS:

- STEP 1: Please list down the top five competitors in this market in the column named 'Competitors.'
- STEP 2: Please assign the rank (scores from 1 to 5) relatively in the column named 'Market Impact' to each of these competitors such that no two competitors have the same score.

SR. NO.	COMPETITORS	MARKET IMPACT	OFFERINGS
1			
2			
3			
4			

Q. 15. According to our pre-analysis, the market size during the forecast period (2020-2026) is given below. Please provide comments, if any, on the data given below?

- Global Enterprise Mobility Management (2020) = USD 16.0 – 17.0 Billion
- CAGR (2020-2026) = 25% to 26%

Primary's Viewpoint: _____

Q. 16. Do you think the segmentation is comprehensive and covers major business segments of the market? Any other sections you would like to see in the report?

AMENDMENTS/FEEDBACK

Q. 17. What do you think about the EMM market? Please give your opinion in a 2-3 liner quote about the growth of the EMM market in the next five years (excluding any company or product name).

Primary's Viewpoint: _____

We would like to discuss your company profile, understand the product/service portfolio and key strategies, and analyze your competition in the market over a short telephonic call. Please let us know a convenient date and time for the discussion. We can set up the bridge and conference call.

Date

Time

Number of Attendees

About MarketsandMarkets:

MarketsandMarkets (MnM) is a global market research and consulting company. We publish strategically analyzed market research reports and serve as business intelligence and consulting partner to Fortune 500 companies across the world. MarketsandMarkets covers seventeen industry verticals, including advanced materials, aerospace and defense, agriculture, automotive and transportation, biotechnology, building and construction, chemicals, energy and power, food and beverages, industrial automation, medical devices, mining, minerals and metals, packaging, pharmaceuticals, semiconductor and electronics, and telecommunications and IT.

Please feel free to download our Telecom and IT Research and Analysis Brochure from our group page for a comprehensive understanding of our offerings for your company.

Web Link: - <http://www.marketsandmarkets.com>

13.3 KNOWLEDGE STORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL

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Automotive & Transportation						
Banking & Financial Services						
Chemicals & Material						
Energy & Power						
Food & Beverage						
Healthcare						
Information & Communications Technology						
Packaging, Construction, Mining & Gases						
Retail & eCommerce						
Semiconductor & Electronics						

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HIGH GROWTH MARKETS

Industries 

Industries	CAGR % (2018 - 2023)
Aerospace & Defence (285)	24.07%
Agriculture (210)	23.78%
Automotive & Transportation (270)	22.22%
Chemicals & Material (1119)	21.20%
Energy & Power (363)	21.06%
Food & Beverage (309)	13.88%
Healthcare (928)	13.36%
Information & Communications Technology (852)	
Analytics (128)	
Cloud Computing (80)	
Data Centre & Networking (73)	
Digitalization & IoT (77)	
Information Security (138)	
Mobility & Telecom (116)	
Software & Services (240)	
Semiconductor & Electronics (915)	

Subscription Status

REPORT TITLE	DOMAIN	MARKET SIZE (USD BN - 2018)	CAGR %	PUBLISH DATE
Blockchain in Retail Market by Provider, Application (Compliance Management, Identity Management, Loyalty & Rewards Management, Payment, Smart Contracts, and Supply Chain Management), Organization Size, and Region - Global Forecast to 2023	Information & Communications Technology	0.08	96.4	Jun 2018
Narrowband IoT Market by Application Software, Technology Service, Vertical, Smart	Information &	0.61	91.3	Nov 2016
Blockchain-as-a-Service Market by Component (Tools and Services), Business Application (Supply Chain Management, Smart Contracts, Identity Management, Payments, and GRC Management), Organization Size, Industry, and Region - Global Forecast to 2023	Information & Communications Technology	0.62	90.1	Jun 2018
Low Power Wide Area Network Market by Connectivity Technology (SIGFOX, LoRaWAN, Weightless and Others), Technology Service, Network Deployment, Application, Verticals and Region - Global Forecast to 2021	Information & Communications Technology	3.62	89.3	Jul 2016

13.4 AVAILABLE CUSTOMIZATIONS

With the given market data, MarketsandMarkets offers customizations as per the company's specific needs. The following customization options are available for the report:

PRODUCT ANALYSIS

- Product Matrix, which gives a detailed comparison of the product portfolio of each company

GEOGRAPHIC ANALYSIS

- Further breakup of the North American EMM market
- Further breakup of the European EMM market
- Further breakup of the APAC EMM market
- Further breakup of the Latin American EMM market
- Further breakup of the MEA EMM market

COMPANY INFORMATION

- Detailed analysis and profiling of additional market players (up to 5)

13.5 RELATED REPORTS

SR. NO	REPORT TITLE	PUBLISHED DATE
BYOD AND ENTERPRISE MOBILITY MARKET - GLOBAL FORECAST TO 2021		
1	By Software (MDM, Mobile Content Management), Security (Device Security, Network Security, IAM), Service (Managed & Professional Services), Deployment (Cloud & On-Premise), Vertical, and Region https://www.marketsandmarkets.com/Market-Reports/enterprise-mobility-334.html	November 2016

	MOBILE CONTENT MANAGEMENT MARKET - GLOBAL FORECAST TO 2020	
2	By Deployment Type, User Type (Small and Medium Enterprises, and Enterprisers), Vertical, & by Region (North America, Europe, Asia-Pacific, Middle East and Africa, and Latin America) https://www.marketsandmarkets.com/Market-Reports/mobile-content-management-market-73216057.html	November 2015

13.6 AUTHOR DETAILS

Balaji Sreedhar

*Associate Vice President,
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With an experience of over 14 years, he has been associated with ICT research for more than 10 years now. Prior to joining Markets and Markets, he has worked with firms like Frost and Sullivan, AMI-Partners, TNS Market Research and global IT major, IBM, where he worked for more than 5 years and his last role saw him as Market Segment Manager. He holds a rich experience in the technology sector working on several custom and syndicated research assignments with large Multinational Organizations.

Sameer Bhatnagar

*Associate Director,
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The role encompasses handling syndicated and custom research projects in the ICT domain. Having more than 14 years of experience with 10+ years in research, Sameer joined MarketsandMarkets from Forrester Research where he was working as a Consultant, serving the Business Technology (BT) Professionals role. The role saw him working on varied consulting/custom-research projects and communicating directly with clients, internal resources (i.e., sales, research), and third-party vendors to address queries and manage expectations to create quality deliverables. Sameer has singlehandedly driven projects that include deliverable's in the shape of data modeling, trend analysis, end-user requirements, competitive profiling, etc.

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