TECHNOLOGY HOLDINGS

Investment Banking in Tech Services, Consulting, Software & Healthcare

Telecom Innovation: The Software and Tech Services Shaping the Future of Telcos

A Comprehensive Analysis of Key Trends and M&A Deal Activity in 2023

February 2024

Introduction

This research report from Technology Holdings, offers a comprehensive view of sector's dynamics and the transformative impact of software and services in Telecom. As the Mobile World Congress unfolds, our analysis extends beyond current trends and innovations to a focused examination of M&A activities over the three years

This exploration reveals how strategic acquisitions and partnerships are reshaping the telecom landscape, offering insights into market drivers, impacts, and future opportunities. Join us as we navigate through innovation, consolidation, and growth trends that are defining the future of telecommunications.

1. **Empowerment and Self-Service through Automation, AI, and ML**
2. **Advanced Analytics: Central to Elevating Telco Customer Experiences**
3. **Growing Enterprise Demand for Mobile Edge Computing**
4. **Meeting Enterprise-wide need for Cybersecurity**
5. **Telcos Elevate IoT Influence: From Connectivity to Comprehensive Solutions**

M&A trends

1 **Increased Demand for Cybersecurity and Customer Experience Capabilities**

2 **Increased Private Equity Interest**

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About Technology Holdings

Technology Holdings (TH) is a **global boutique investment bank** dedicated to delivering M&A and capital raising advisory services to **Technology Services, Software, Consulting, Healthcare Life Sciences and Business Process Management Companies** globally with enterprise values ranging from **US $25 Million to US $500 Million.**

TH has a global team of over 75 people across Nine countries including UK, USA., France, Germany, Canada, Spain, India and Australia.

Our focus, with a 23-year track record...

Digital Transformation & Innovation	IT Services Cloud & Cybersecurity	Analytics, Data Sciences & AI	Fintech, Insurtech and SaaS
Consultancies	Healthcare & Lifesciences	Business Process Management	Engineering Services

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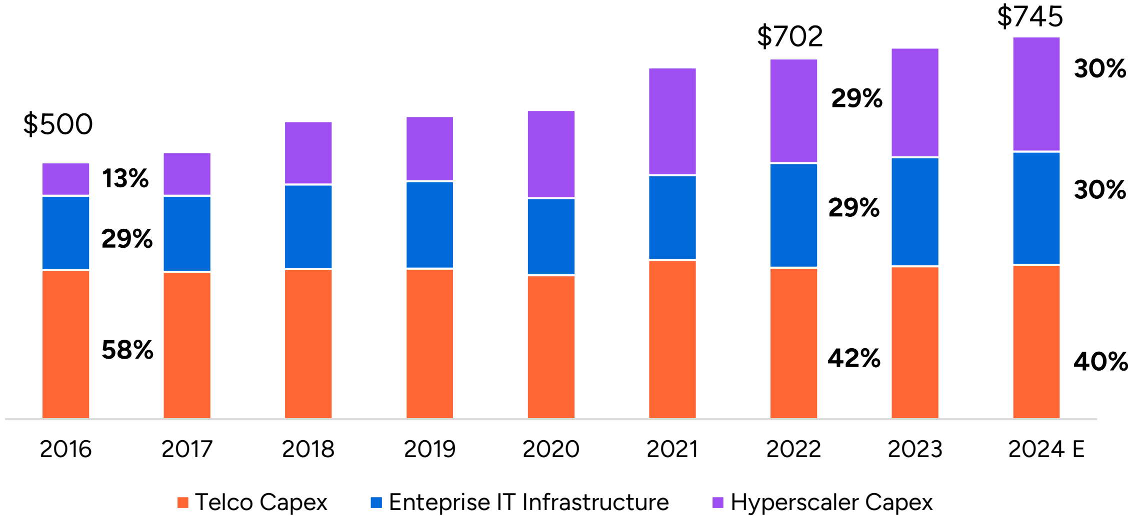
Market Overview and Industry Trends

SECTION I

Market Snapshot

- **Telco Capex Resilience**: Rising from **US $290 Billion** in 2016 to an anticipated **US $301 Billion** in 2024, signaling enduring strength and adaptation to new technologies like 5G and IoT
- **Enterprise IT & Hyperscaler Investment Boom:** Enterprise IT Capex surges to **US $220 Billion** and Hyperscaler to US **$224 Billion** by 2024, highlighting significant growth in cloud services and IT infrastructure
- **Telecom Infrastructure Focus:** Enhanced data traffic and high-speed internet needs propel investments in **fiber optics**, and **data centers**
- **Innovation Spurs Capex: Artificial intelligence**, **edge computing**, **cybersecurity** and **virtual reality** contribute significantly to the increasing telecom capex, underscoring a commitment to technological advancement
- **Market Transformation Tactics:** Network densification and digital shifts, including **SDN/NFV**, drive the telecom sector's investment and growth strategies
- **Adaptive M&A Strategy:** In response to **financial** and **geopolitical headwinds**, the TMT sector adopts a cautious approach, selectively pursuing **strategic, high-quality M&A** opportunities
- **Creative Dealmaking in a Challenging Economy:** Firms capitalize on the economic environment through innovative deal structures, including **joint ventures** and **public-to-private** transactions, to stay competitive

Figure 1: Capital Expenditure for Telcos, Enterprise Network and Hyperscaler: 2016 -2024 in US $Billion



High Growth Areas

1. Cybersecurity
2. Predictive Maintenance
3. Enterprise IoT
4. SDN/NFV based Cloud Native Solutions*

Key Technology Enablers

- 5G
- Telco Cloud
- AI/ML
- Edge Computing

Combined Capex of $745B across telecom, enterprise networks, and hyperscalers in 2024 underscores a vast market ripe for vendor innovation and strategic M&A

*SDN: Software Defined Networking, NFV: Network Functions Virtualization

Source :Synergy Research Group

Telecommunication Services and Software Ecosystem

airtel · Telefónica · at&t · Virgin mobile · Jio · TELSTRA · verizon · 中国移动 China Mobile · vodafone

Infrastructure

RAN
HUAWEI · SAMSUNG · ERICSSON · ZTE · NEC · NOKIA

O-RAN
Airspan · MAVENIR · ALTIOSTAR · Parallel Wireless

Other Network Infrastructure
Hewlett Packard Enterprise · TEJAS NETWORKS · JUNIPER NETWORKS · CISCO · ARISTA · Akamai

Software & Platforms

Network Management
ORACLE · dynatrace · auvik · IBM · riverbed

OSS/BSS
ACCEDIAN · STL · Tecnotree · amdocs · Netcracker · alepo

Customer Management
SAP · COMARCH · Simply · salesforce

Analytics & AI
kyndryl · TEOCO · aws · ALTAIR · SYTOSS

Support Services

Strategy & Consulting
accenture · DYCOM · McKinsey & Company · KPMG · TATA COMMUNICATIONS

Engineering Services
dek TECHNOLOGIES · wsp · virtusa · CYIENT

Cybersecurity Services
ITSEC · Bitdefender · utimaco

Managed Services
wipro · tcs TATA CONSULTANCY SERVICES · HCL · Tech Mahindra

Content & Applications

Streaming Platforms
JWPLAYER · VINDRAL · BRIGHTCOVE · MUVI

Messaging Applications
HORISEN · ClickSend · comviva A TECH MAHINDRA COMPANY · ribbon

Cloud Platforms
aws · Microsoft · Alibaba Cloud · Google Cloud · IBM

Enterprise Solutions

UCaaS
RingCentral · 8x8 · nextiva · VONAGE

CPaaS
twilio · plivo · infobip · TELNYX · MessageBird · sinch

Others
ManageEngine · Microsoft · VAS Experts · SOTI · DELL · RIPPLING · itransition · COMTECH

Consumer Solutions

Gaming
NVIDIA · Gamestream · oneplay · KLIZO solutions pvt. ltd. · EA SPORTS

Streaming Applications
NETFLIX · Spotify · Discovery CHANNEL

Fintech
Pirimid Fintech · adapt IT · 4c · wefox · bolttech

Others
SAMSUNG · Quick Heal · Avast

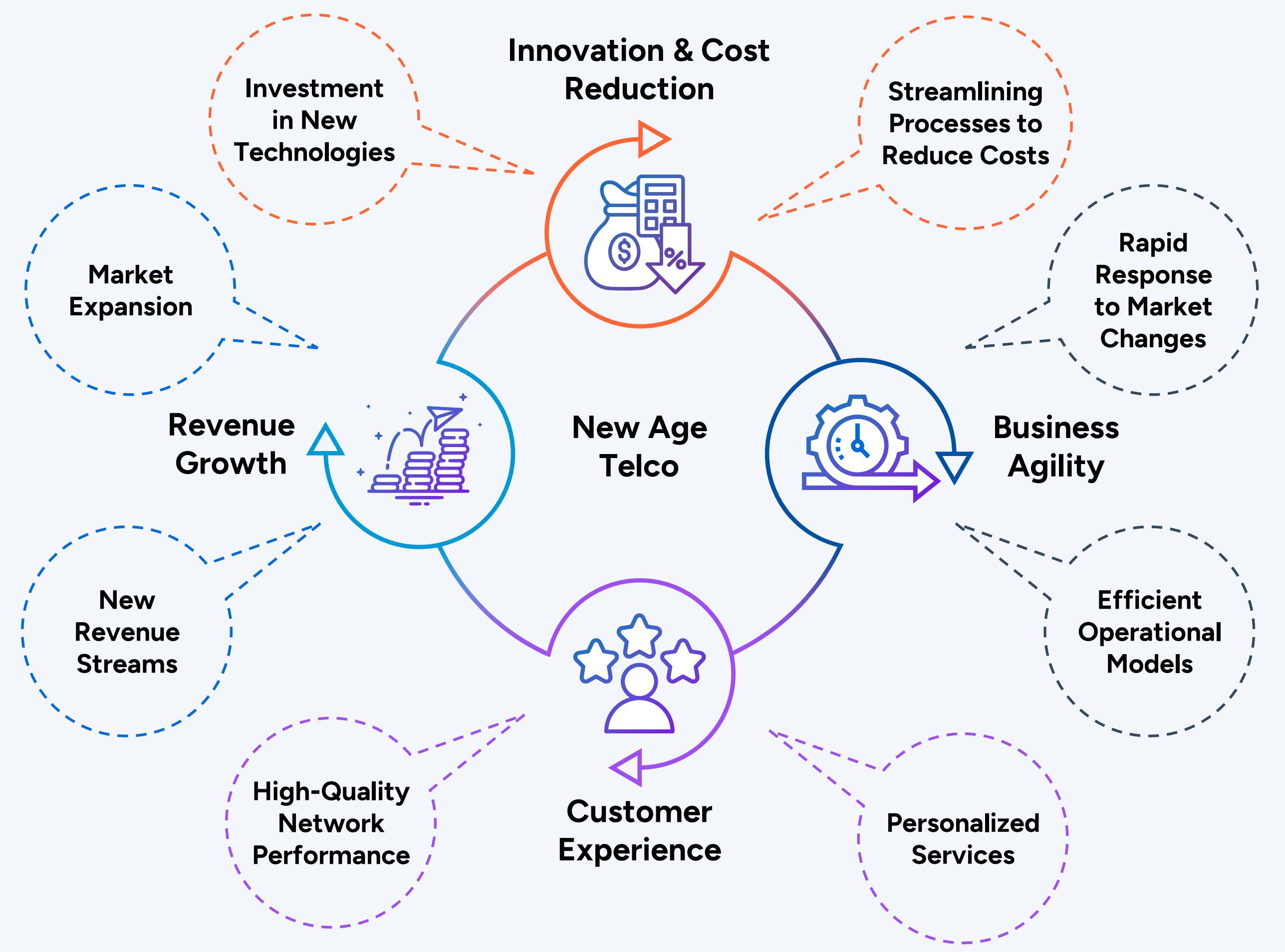
The Emergence of Agile Telcos

The 5G era compels telecoms to scale from millions to billions of devices, challenging current financial models and network approaches that impede innovation and deployment of advanced technologies. An **agile**, **cost-efficient** operation is crucial for leveraging **5G's capabilities**. Agile telcos must focus on:

- **Business Agility & Customer Experience:** Becoming nimble digital service providers is essential, with customer experience at the forefront to compete with tech behemoths like AWS, Google, and Microsoft
- **Revenue Growth & Cost Innovation:** Transitioning to digital offerings unlocks new revenue while demanding cost-effective strategies

Case Study: Telefónica

- **Deploys its Platform Business model as the Central Building Block:** Telefónica's platform strategy covers physical assets, IT systems, products and services, and cognitive/data services
- **Supports customer expectations and business outcomes:** Designed several tools, such as **Novum**, to support customer experiences, including **self-service provisioning, personalization**, **dynamic recommendations,** and **real-time price quotes**
- **Pursues a sophisticated data monetization model:** Telefónica's **Luca** leverages AI and network data for customer insights, setting a benchmark in **data-driven decision** support
- Prioritizes **data security** and customer **data autonomy** with its innovative "**Fourth Platform"** strategy
- Anticipates a **1% boost** to **CAGR** and a **2%** increase in **EBITDA margins** through these strategies



Telecom operators must evolve into digital service providers or be relegated to providing connectivity as a commodity to compete with digital disruptors

Key Trends in Telecom Sector

1

Empowerment and Self-Service through Automation, AI, and ML

2

Advanced Analytics: Central to Elevating Telco Customer Experiences

3

Growing Enterprise Demand for Multi-Access Edge Computing

4

Increasing need for Cybersecurity among Telcos

5

Telcos Elevate IoT Influence: From Connectivity to Comprehensive Solutions

Empowerment and Self-Service through Automation, AI, and ML

- **Strategic AI Investment**: Operators face cost pressures; AI in field services, a significant budget portion, offers crucial savings and efficiencies
- **Operational Automation Imperative:** To address labor shortages and access issues, telcos turn to automation for network upkeep and customer relations
- **Analytics for Customer Support:** AI analytics become vital to deliver targeted customer support, especially with increased network strain and service demands
- **Enhancing Customer Interaction:** AI-powered chatbots and intelligent search tools improve customer experiences by providing timely and effective remote assistance
- **Network Management Evolution:** Implementing AI in network operations relieves field staff and leads to more efficient maintenance and management
- **AI as a Foundational Element:** Leading telecoms are integrating AI deep into their fabric, enhancing products and streamlining processes for greater value and efficiency

Profit Potential of AI in Telcos[1]:

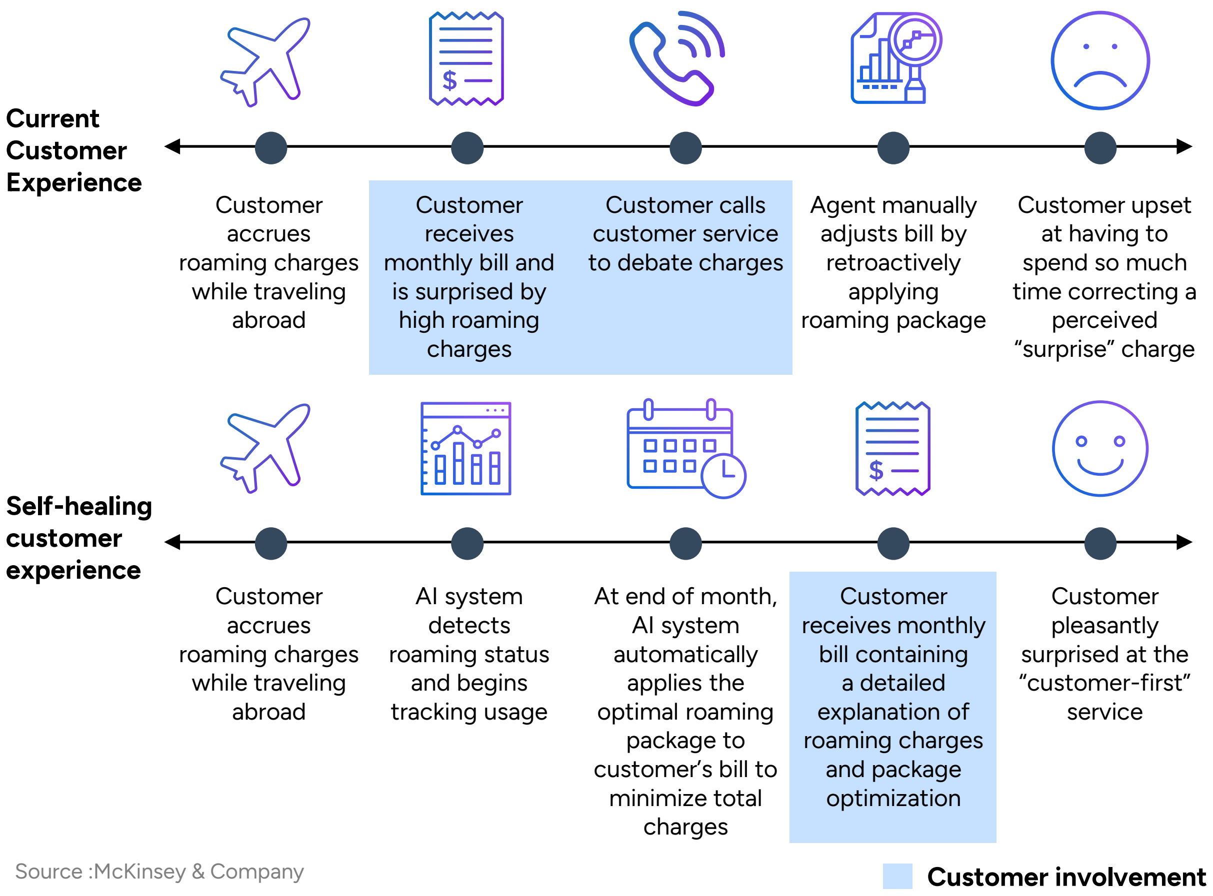
Marketing & Sales — Revenue Increase

0.5%-1.5%	0.5%-1.5%	2.0%-3.5%	2.0%-3.5%	0.5%-1.0%
Personalized Lead Generation	Churn Management	Upselling & Cross-selling	Price Optimization	Precise use of Content & Media

Network & Operations — Cost Savings

0.5%-1.5%	0.5%-1.5%	2.0%-3.5%	2.0%-3.5%	0.5%-1.0%
Optimized Network Rollout	Optimized Network Assets	Optimized Field Labour Force	Predictive Maintenance	AI Based Customer Service

Self-healing AI Solutions strengthen both operational efficiency and brand loyalty by turning potential billing dispute into a positive customer experience



Source :McKinsey & Company

AI in telcos: A dual lever to simultaneously hike revenues by up to 10% and slash costs by up to 10%, optimizing the entire value chain

[1]Source :BCG Experience

Advanced Analytics: Central to Elevating Telco Customer Experiences

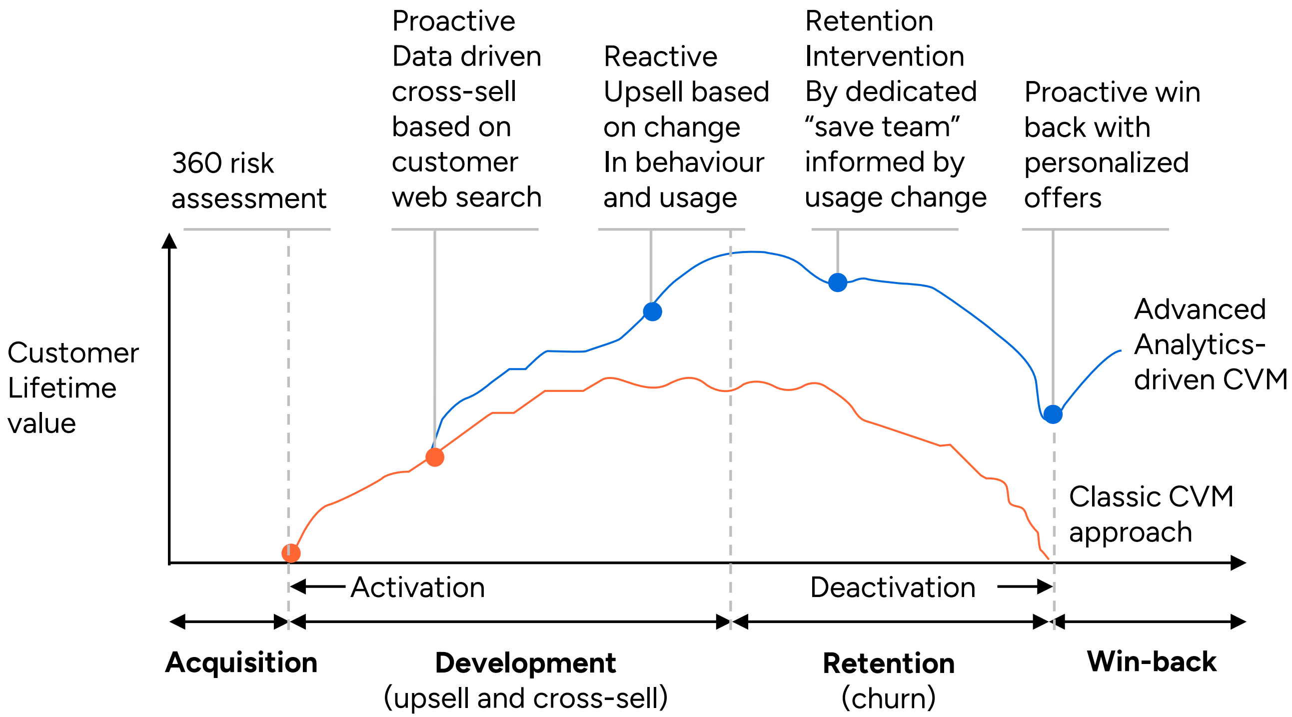
- **Multi-channel Strategy:** Telcos tailor engagement across diverse platforms, leveraging mobile and social media for customer interaction
- **Customer Data Utilization:** Segmentation and personalization are driven by in-depth customer data analysis to enhance user experiences
- **Targeted Marketing:** Data-driven insights inform marketing strategies, offering personalized services to meet customer expectations
- **Social Media Integration:** Telcos employ social listening to align services with customer needs, ensuring relevancy and timeliness
- **Omnichannel and AI Synergy**: AI and ML are pivotal in creating seamless omnichannel experiences, ensuring each customer journey is personalized and efficient

Five Elements that are Key to Maximizing the Potential of Analytics-driven CVM

Opportunity Identification	Rapid Activation at Scale	Martech & Data Enablement	Agile Operating Model	Capability Building

A comprehensive approach to data-driven personalization

Operators can transform Customer Value Management (CVM) by deploying analytics to maximize value throughout the customer lifecycle, personalizing every interaction



Source :McKinsey & Company

Analytics-driven CVM transforms telcos into customer-centric powerhouses, personalizing interactions across the lifecycle

Key Trends in Telecom Industry

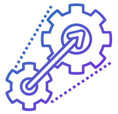
Growing Enterprise Demand for Multi-Access Edge Computing (MEC)

- **MEC Use Cases:** From AR/VR to industrial robotics, MEC enables a range of ultra-low-latency applications vital for Industry 4.0
- **Immediate MEC Opportunities**: Gaming, video analytics, and AR/VR are poised for growth, pending alignment with 5G edge capabilities
- **5G & MEC Integration:** The combination offers new business models and real-time services, transforming user experiences
- **Telecom Edge:** Service providers and vendors will benefit from the MEC demand, enhancing telecom's role in IoT and smart solutions
- **Innovations in Connectivity:** The MEC market's evolution, driven by 5G, paves the way for breakthroughs in autonomous tech and smart infrastructures

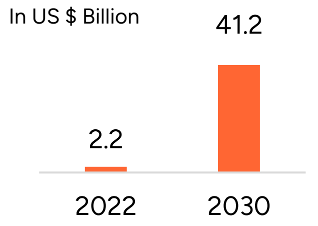
Benefits of MEC


Decreased latency

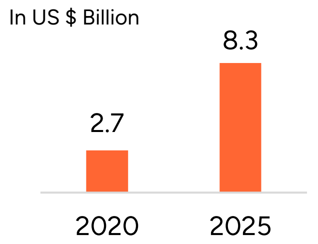

Greater security and reliability


Scalability and savings

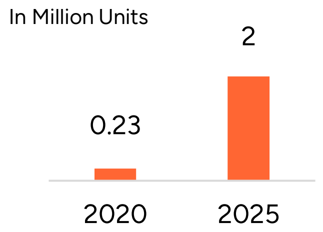
MEC Market Size



Network Operator Spending on MEC



MEC Nodes



Use Cases for Multi-Access Edge Computing by Category and Required Latency:

Category	Use Case	Latency
AR/VR/Gaming	AR/VR motion-to-photon	7-15 ms
	Collaborative Gaming	<20 ms
Industrial	Motion Control	0.5-2ms
	Control-to-Control Communication	<=10ms
	Mobile Robots: Precise cooperative robotic motion control, Machine Control, Cooperative driving, Real time video streaming	1ms to 100ms
Automotive	Wireless Roadside Backhaul	10 ms
	Sensor Sharing	<20ms
	Platooning	<= 10 ms
	Remote Driving Information Sharing	<=5 ms
	Cooperative Collision Avoidance	<=10ms
Transport and Logistics	Time Critical Sensing	<30 ms
	Remote Drone Operation	10-30 ms
Smart Cities	Smart Grid	<30 ms

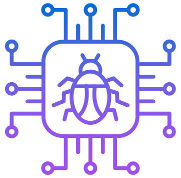
MEC & 5G: Catalyzing Next-Gen Connectivity, Driving Telecom to the Forefront of Enterprise Innovation

Source :Juniper Research

Meeting Enterprise-wide need for Cybersecurity

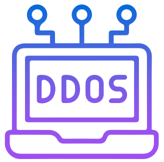
- Telecoms hold **critical infrastructure**, making them prime targets for impactful cyber-attacks and data breaches
- Theft of **customer data** and financial information poses significant **extortion and fraud** risks
- Cyber-attacks can cause service disruption, **website damage, and severe reputational harm** to telecom operators
- Telecom firms consider **AI (47%)** and **Blockchain (39%)** to be the top cybersecurity trends

Cybersecurity Threats Facing Telecom Companies:



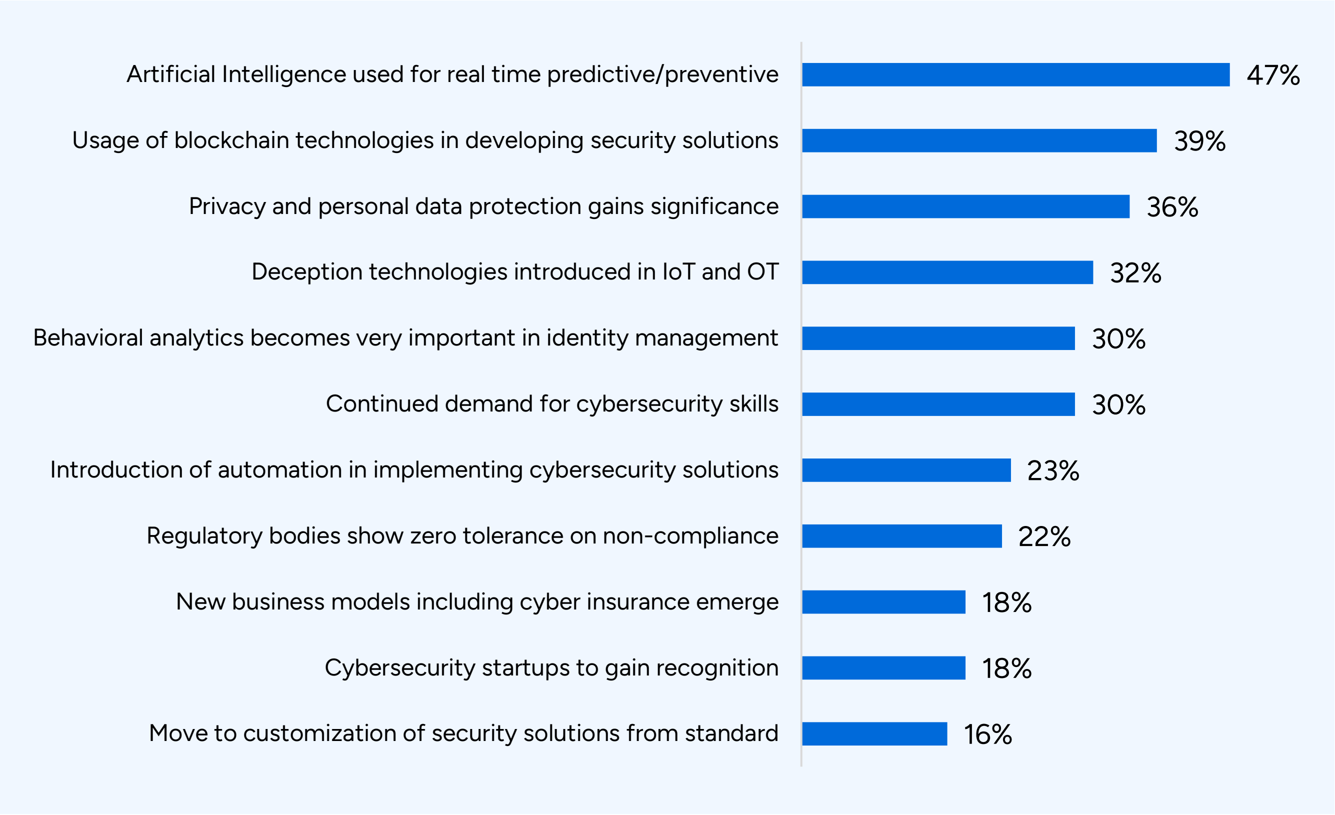
APTs: Complex cyber-attacks targeting data theft or operational disruption, typically by nation-states or funded groups

RDP: A remote access protocol vulnerable to malware exploiting its flaws for unauthorized control



DDoS attacks flood networks, denying access to genuine users

Figure 2: Key Cybersecurity Trends



Telecom service providers navigating the cyber threat landscape to safeguard infrastructure and customer trust

[1]Source :Cybersecurity Trends, Cisco,, 2022

Telcos Elevate IoT Influence: From Connectivity to Comprehensive Solutions

- IoT evolution drives telecoms to adapt, leveraging high IoT maturity for competitive value-added services
- Installed IOT devices projected to hit **25.1 billion by 2027,** signaling a device-dense future
- Sensor tech growth in **auto, manufacturing, retail** spurs higher demand for telecom connectivity services
- Telecoms uniquely poised to offer **cost-efficient**, **central connectivity** in the burgeoning IoT landscape
- Telecom industry's pivot to **IoT services** capitalizes on existing strengths, offering new business avenues

40%

of Telecom Enterprises are strongly involved in IoT Initiatives

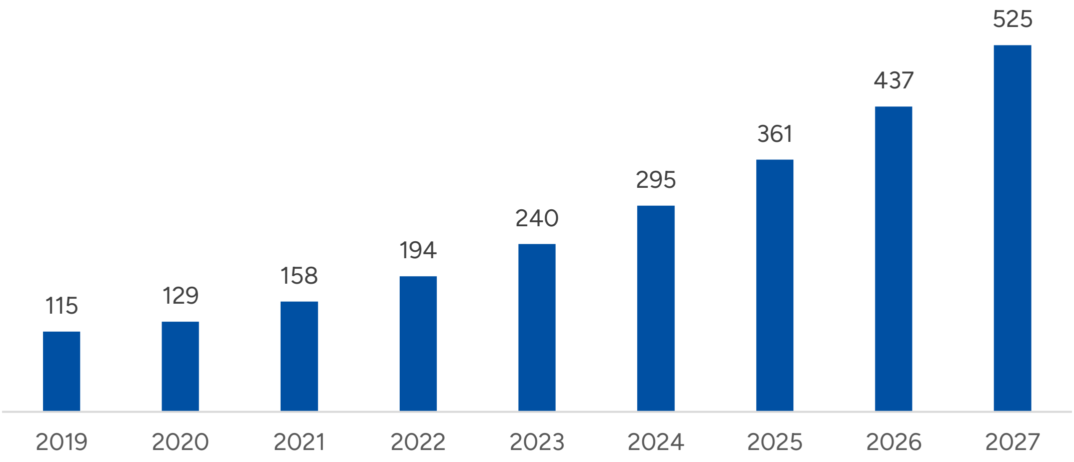
70%

of European Enterprises consider cost reduction and enhanced efficiency the major factors of IoT adoption

Drivers of IoT Adoption

- Decreasing cost of CPU, Memory & Storage
- Increasing Device Proliferation
- Convergence of IT & Operational Technology
- Advent of Big Data & Cloud
- VC Spend and Investment

Figure 3: Global Enterprise IoT Revenue Market Size in USD Billion[1]



IoT Value Chain Composition and Contribution by Each Segment in 2027

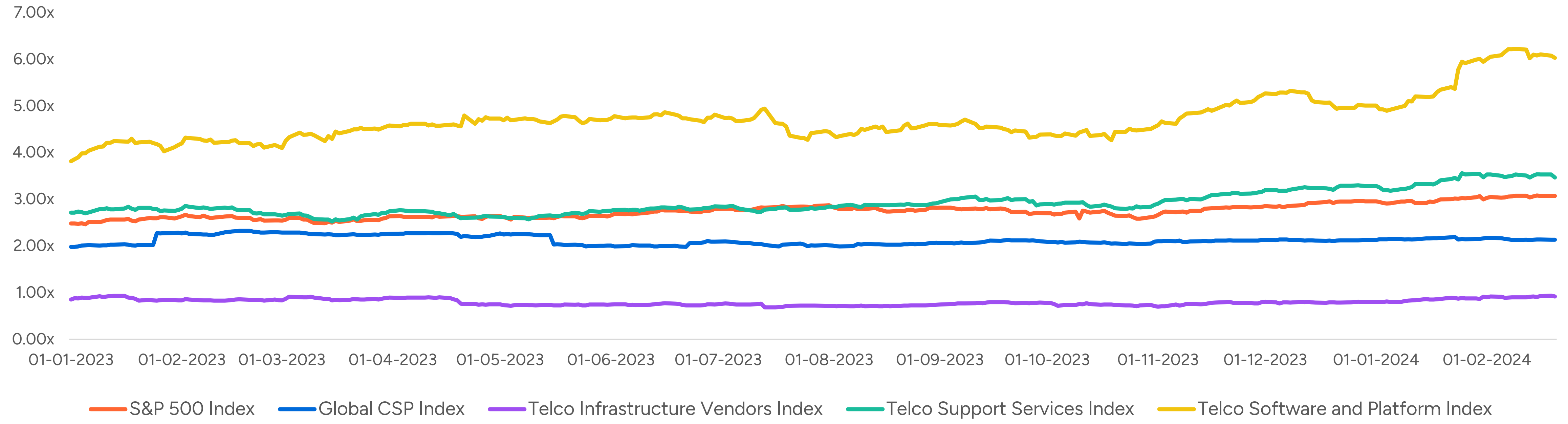
Hardware	Connectivity	Software and Services
34%	11%	55%
US $178 Billion	US $58 Billion	US $289 Billion
Device Provider	Network Provider	Platform and Application Provider

IoT Expansion: A golden opportunity for telecoms to lead in connectivity and innovation

[1]Source :IoT Analytics ,March 2022

Telecom Sector Valuation: Outpacing the S&P 500

Figure 4: Telecom Sector Index vs S&P 500 Index



- **Telco Software Outperforms S&P 500**: Trading at 6X in Jan 2024, reflecting a robust demand for innovative digital solutions
- **Support Services Index Gains:** Achieves 3.47X in Jan 2024, surpassing S&P 500, driven by the growing need for specialized telecom services

Appendix:

Global CSP Index: AT&T, Vodafone, Telefonica, Singtel, Telstra, China Mobile, NTT Group, Verizon

Telco Infrastructure Vendors Index: Ericsson, Nokia, NEC. Cisco Systems, Juniper Networks

Telco Support Services Index: Accenture, IBM, Wipro, TCS, HCL. Tech Mahindra

Telco Software and Platforms: Oracle, SAP, Amdocs, Juniper Networks,

Telco Software and Support Services indices surpass S&P 500, highlighting the value in telecom's digital and support sectors

Source : [1]Open Insurance Report By Accenture

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Market Analysis

SECTION II

Key Drivers for M&A Activity in Telecommunications Sector

Enhanced Customer Experience

- **Advanced Tech Acquisition for Customer Interaction**: M&A activity focuses on acquiring mobile, AI, and self-service technologies to enhance personalized customer experiences
- **Customer-Centric M&A Strategy in Telecom**: Telecom M&As strategically adopt customer-focused service models, leveraging technology to improve market stance and consumer loyalty
- **Netwo's Strategic Acquisition by Altitude Group:** The acquisition of Netwo by Altitude Group exemplifies M&A aimed at offering a **comprehensive telecom infrastructure marketplace**, automating tasks for efficient **client service delivery**

Diversification of Services

- **Expansion Through M&A**: Telecoms pursue M&A to integrate services like cloud computing, BPO, and cybersecurity, catering to evolving customer demands and driving new revenue
- **Enhancing Competitive Advantage**: Mergers and acquisitions enable telecoms to broaden their service offerings, including managed services and network security, to improve competitiveness and customer loyalty
- **Acquisition of Expertime**: Orange Business Services' acquisition of Expertime emphasizes its commitment to augmenting cloud services, aiding businesses, especially SMBs, in their cloud migration journeys

Enhancing Cybersecurity Capabilities

- **Cybersecurity Focus in M&A:** With increasing cyber threats, telecom firms are prioritizing acquisition of robust cybersecurity solutions to protect data and ensure secure communications
- **Security-First Network Integration**: Acquisitions of cybersecurity firms empower telecoms to integrate advanced security into networks, ensuring a trusted, secure customer experience
- **Cybersecurity Deal Prevalence:** Since January 2024, cybersecurity-related transactions have represented approximately **20.8% of** total telecom M&A deals, underlining its strategic priority

Increased Private Equity Interest

- **PE's Role in Consolidation:** PE firms often act as catalysts for consolidation, buying up smaller players to create larger entities that can compete more effectively in the telecom market
- **Strategic Value Addition:** Beyond capital, PE brings expertise in operational efficiency and market strategy, which can be vital for telecom companies looking to scale and innovate
- Recently, **AfricaInvest** acquired **Netis Holdings**, and **Vector Capital** took over **Riverbed Technologies,** showcasing significant PE-driven M&A activity

Strategic M&A shaping telecom's future: Enhanced customer experience, diversified services, fortified security, and PE-driven consolidation

Source: Technology Holdings, M&A Tracker 2024

M&A Activity Analysis : Communications & Networking Deals (Jan 2023 – Jan 2024)

Date	Target	Buyers	Country
Communications and Networking			
Jan 2024	Kaiser & Partners	earnscliffe strategies	Canada
Jan 2024	TELENOVA	teccle group	Germany
Jan 2024	RPM Communications	BOWMARK CAPITAL	United Kingdom
Jan 2024	IPC	Svp	United States
Jan 2024	FORZA TELECOM	AFL	United States
Dec 2023	Merkator	Sofindev	Netherlands
Dec 2023	ROSACE	NGE	France
Nov 2023	DIGICAST	Desjardins Capital	Canada
Nov 2023	infotel	VINCI ENERGIES	Czech Republic
Nov 2023	Spriggs	ubeo	United States
Oct 2023	Tietjen Technologies Inc.	NLC	United States
Sep 2023	On Air Solutions	MCA	United States
Sep 2023	NIUTECH	Sun4Energy	Sweden
Sep 2023	M	Groupe Baelen	France
Aug 2023	DENSOU	CORE CONCEPT	Japan
Jul 2023	evolutio	lyntia	Spain
Jul 2023	SYSTEMICS PAB	apave	Poland
Jul 2023	mimomax	UBIIK	New Zealand
Jul 2023	Artificial Intelligence & Machine Learning Business	Lucy	United Kingdom
Jul 2023	OnCall Telecom	Bluewave Technology Group	United States

Date	Target	Buyers	Country
Jun 2023	ELECNET AE	fiber experts	Germany
Jun 2023	cm city media	SV Group	Germany
May 2023	Sandeul Networks	Wizone	South Korea
May 2023	FONEBOX	maxo Telecommunications	Australia
May 2023	Diamond Communications LLC	CanalPointe Capital	United States
Apr 2023	radionika	funkwerk	Poland
Apr 2023	flight3	flightstory	United Kingdom
Apr 2023	LINE Clova	LINE WORKS	Japan
Mar 2023	MobiKOM	Altamir	Denmark
Mar 2023	WISECONNECT	GRIDSOURCE	United States
Mar 2023	Personlig svarsservice	RESPONDA GROUP	Sweden
Mar 2023	ANE Adams Network Engineering	Deutsche Beteiligungs AG	Germany
Feb 2023	RACOM	EASTERN COMMUNICATIONS, LTD.	United States
Feb 2023	Grupo VIATEK	AURICA	Spain
Jan 2023	CONNECTED NATION	CONNECTED NATION	United States
Jan 2023	Intrado	symbio	Australia
Jan 2023	Koslowski		Germany
Jan 2023	SpatialNetworX	LUMINE	United States
Jan 2023	tellza	MEXEDIA	United States
Jan 2023	mts	Entrypoint South	Israel

M&A Activity Analysis : Services (Jan 2023 – Jan 2024) (1/2)

Date	Target	Buyers	Country
Telco IT & Managed Services			
Jan 2024	Avency	dbi services by Sequotech	Germany
Jan 2024	Ascentek Technology Solutions	synagex	USA
Dec 2023	CONSIGAS	Exclusive Networks	Ireland
Dec 2023	SEABIX	DATWYLER	Switzerland
Dec 2023	omnia express	Monterro	Sweden
Dec 2023	Expertime	orange Business Services	France
Dec 2023	Rack Bunker	US Signal	USA
Dec 2023	OneSource Communications	M2O Incorporated	USA
Dec 2023	SasaHost	HostAfrica	Kenya
Nov 2023	OfficeConnect	Score Utica	Netherlands
Nov 2023	G12	Momentum Telecom	USA
Nov 2023	Solutions Granted	SonicWall	USA
Nov 2023	pcm Progressive Communications Management	Upstack	USA
Nov 2023	telesis7 Consulting	nagarro	USA
Nov 2023	Tecco	ALCapital	Australia

Date	Target	Buyers	Country
Oct 2023	JDM	IT Relation	Denmark
Oct 2023	VoerEir	UST	Sweden
Oct 2023	rmsource	Check Point	USA
Oct 2023	IBIT Solutions Limited	TechsolGroup	UK
Oct 2023	useIT	Fivespark	Netherlands
Sep 2023	TechGen	teal	USA
Sep 2023	SSC	Nordlo	Norway
Sep 2023	CSB	GDC	USA
Sep 2023	ReTech	Concentric	USA
Sep 2023	TAG	AYCE Capital	Canada
Aug 2023	Paladin Technologies	Bosch	Canada
Aug 2023	Herrod Technology	ThePurpleGuys	USA
Aug 2023	Advantex	ThePurpleGuys	USA
Aug 2023	netsolus	IP Pathways	USA
Aug 2023	satisnet	Gamma	UK

M&A Activity Analysis : Services (Jan 2023 – Jan 2024) (2/2)

Date	Target	Buyers	Country
Telco IT and Managed Services			
Aug 2023	rSolutions	Gallant Capital	Canada
Aug 2023	InfoSkill	FalkonTechnologies	Canada
Aug 2023	Novasa	shape	Denmark
Aug 2023	Strata Consulting	BlueAlly	USA
Jul 2023	Strongbow Consulting Group	accenture	USA
Jul 2023	iziTek	AXIO	France
Jul 2023	CuraTec	ram infotechnology	Netherlands
Jul 2023	EMR integrated solutions	erisbeg	Ireland
Jul 2023	Avance ICT Groep Nederland	IT-Synergy	Netherlands
Jul 2023	Wise Security	SeSa	Spain
Jun 2023	SMP Security Management Partners	GRAVOC	USA
Jun 2023	LightHouse	Iron Edge	USA
Jun 2023	dek Technologies	endava	Australia
Jun 2023	Bluegrass Computer Services	modernnetworks	UK
Jun 2023	GCS	Evergreen	USA
Jun 2023	Pivot Point Security	CBIZ	USA
May 2023	machineLOGIC	SOURCEPASS	USA
May 2023	celito	MC Partners	USA
May 2023	nte	babble	UK
May 2023	Acropolis	ITSolutions	USA
May 2023	serverius IT Infrastructure	CapMan	Netherlands
May 2023	La Jolla Logic	AURIA	USA
Apr 2023	Zetacom	Avedon Capital Partners	Netherlands
Apr 2023	Benkgroep IT & Telecom	hallo,	Netherlands
Apr 2023	Patch Advisor	CORE4CE	USA
Apr 2023	3TO	GAINS	USA
Mar 2023	Set Solutions	TRACE3	USA
Mar 2023	Stellarise	Velocity Technology Group	UK
Mar 2023	ClearShark	OPTIV	USA
Mar 2023	Integra	INSA	Canada

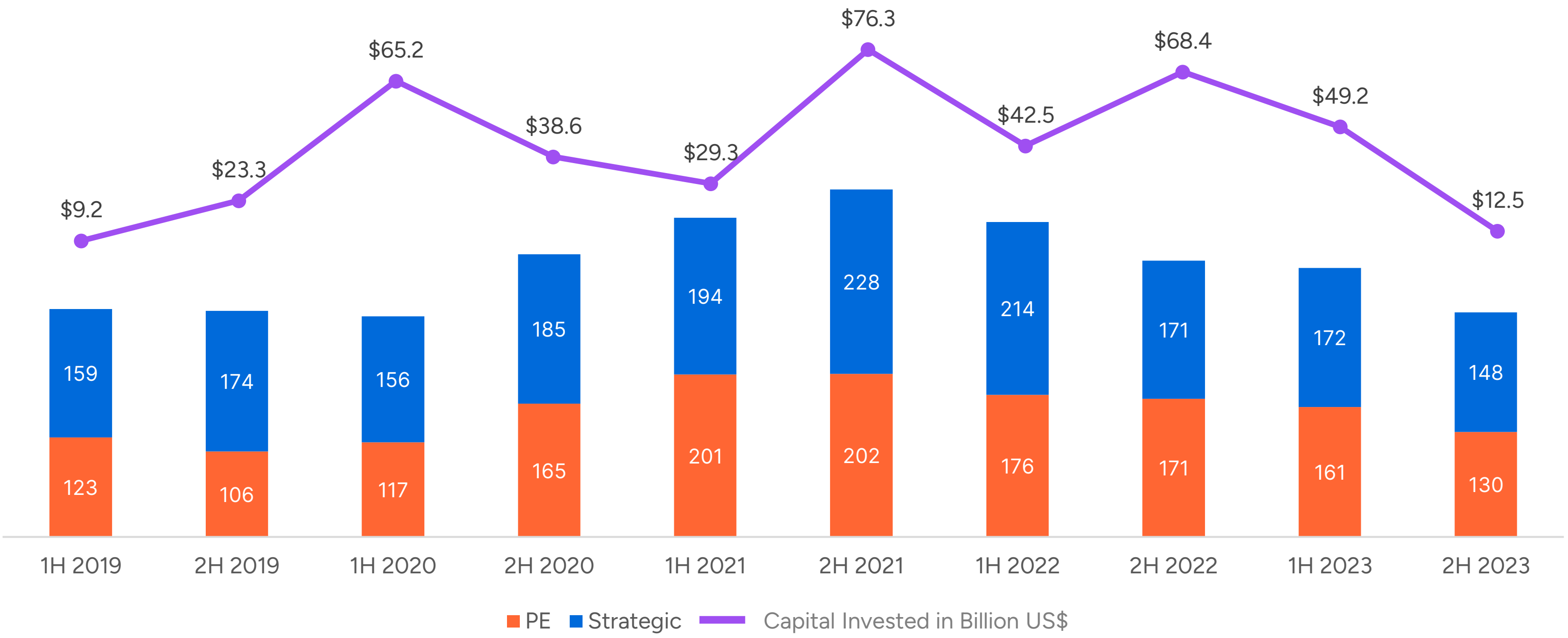
M&A Activity Analysis : Software (Jan 2023 – Jan 2024)

Date	Target	Buyers	Country
Telecom Software and Platforms			
Jan 2024	NetExperience	PAVLOV media	Canada
Jan 2024	TRAKK	taggr	Sweden
Jan 2024	Authomize	Delinea	Israel
Jan 2024	INSIGHT	Optilogic	USA
Jan 2024	Forsberg Starlink	Teleplan Globe	UK
Jan 2024	PhoenixSoft	MACC	USA
Dec 2023	ScanOnline	RMS Omega Technologies	USA
Dec 2023	MasterStream ERP	Connectbase	USA
Dec 2023	Banyan Security	SonicWall	USA
Dec 2023	DNSSense	Noventiq	UK
Dec 2023	Delacon	Volaris	Australia
Nov 2023	ActiveState	Vertu Capital	Canada
Nov 2023	Increase Your Skills	MetaCompliance	Germany
Nov 2023	Malwarebytes	HighGear Ventures	USA
Nov 2023	RAWSTREAM	FirstPrinciples	USA
Oct 2023	Netwo	Altitude Group	France
Oct 2023	kaleyra	TATA COMMUNICATIONS	Italy
Oct 2023	Evertel	genasys	USA
Oct 2023	Solutions 5	HITS	USA
Oct 2023	infoStructure	Hunter Communications	USA
Oct 2023	AVIRTEK	LOCH Technologies	USA
Sep 2023	GlassWire	domotz	USA
Sep 2023	SamKnows	Cisco	UK
Aug 2023	Big Bad Wolf Security	Owl Cyber Defense	USA
Aug 2023	Shark Identity	Silver Touch	India
Aug 2023	Fidelis Security	PartnerOne	USA
Jul 2023	Privatise	Coro	Israel
Jul 2023	2secure	Octapus.	USA
Jul 2023	indeni	BLUECAT	USA
Jul 2023	nimble	OpenVault	USA
Jun 2023	riverbed	Vector Capital	USA
Jun 2023	SecuLore	exacom	USA
Jun 2023	Acumera	MainSt Capital Corporation	USA
May 2023	Simio	Genesis Capital	USA
May 2023	laager	Constanta	Brazil
May 2023	NETCO	Yielder Group	Netherlands
May 2023	netsecure	Integrity360	Sweden
May 2023	MICROCALL	KT Capital	USA
Apr 2023	Vonahi Security	Kaseya	USA
Apr 2023	Block Harbor	VicOne	USA
Apr 2023	HelloTech	soprano	Singapore
Mar 2023	Svetets	Rostelecom	Russia
Mar 2023	spearline	CYARA	Ireland
Mar 2023	SAFE WAY	stefanini	Brazil
Mar 2023	TITAN.IUM	LUMINE	USA
Mar 2023	TUTUS	CR	Sweden
Feb 2023	Cityside Fiber	SDC Capital Partners	USA
Feb 2023	Hello Labs	banyan software	USA
Jan 2023	Simplex	DMI	Canada
Jan 2023	thiga	DOCAPOSTE	France

M&A Activity: Semi-Annual Trends

- **2021 Surge Driven by COVID-19:** The pandemic catalyzed M&A activity in 2021, emphasizing digital transformation and strategic innovation needs.
- **Strategic Deals for Resilience:** Strategic transactions through 2021 highlight efforts to consolidate and build resilience, driven by the pandemic's challenges.
- **Cybersecurity as a Growth Engine:** Rising cyber threats have propelled the cybersecurity market, with over 10% annual growth driving strategic acquisitions of key players and startups.
- **PE Investment Adaptability:** PE's flexibility showcased in the variability of transactions, peaking in 2021 as firms adapted to digital acceleration demands.
- **Mid-Market Resilience in 2024:** While larger deals have slowed, mid-market M&A activity remained robust in 2024, reflecting adaptability and ongoing opportunities for strategic growth

Figure 5: Number of M&A Transactions : 2019-2024



Year-Wise M&A Transactions	3,353	732	611
	2019-23	2022	2024

Mid-market M&A thrives in 2024, reflecting strategic shifts and cybersecurity's rising importance in deal-making

Source: Technology Holdings, M&A Tracker 2024

M&A Activity Analysis by Area of Specialization

Communications and Networking Deals (36%)

- Heavy investment in solutions and services enhancing enterprise communication infrastructure
- Growth in consulting, management, and maintenance services for Telecom and ISPs
- Deals fuel digital infrastructure optimization, including in telecom tower companies and IoT investments

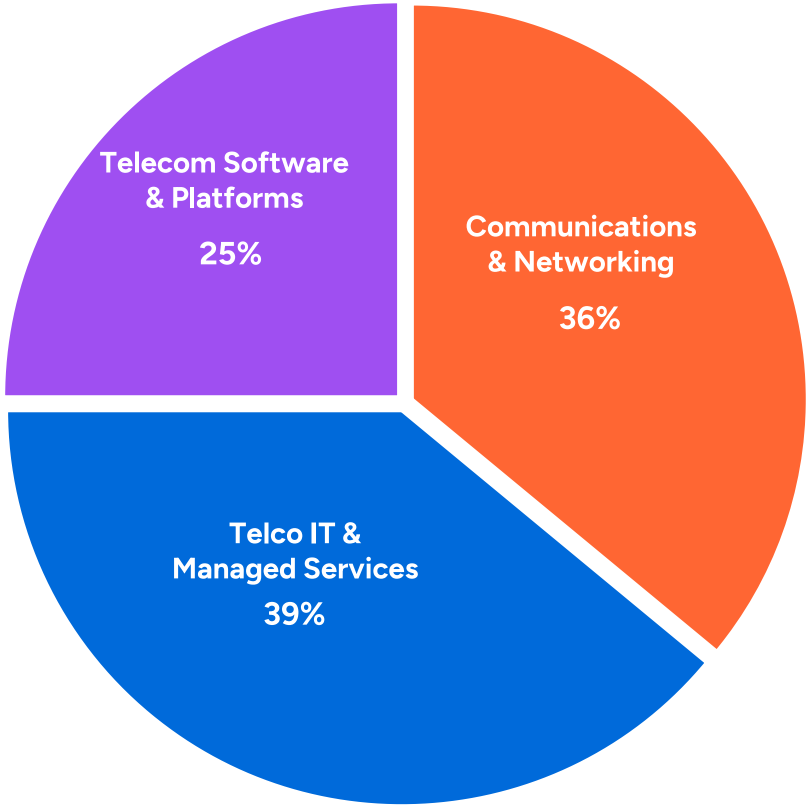
Telecom IT and Managed Services(39%)

- Managed & Cybersecurity Services Growth: Surge in demand for managed services and cybersecurity offerings for telecom and enterprises
- Cloud & Disaster Recovery Importance: Increasing reliance on cloud computing, data center services, and disaster recovery solutions

Telecom Software and Platforms (25%)

- PE Investment Continues: Software deals, especially those offering cybersecurity and collaboration tools, attract PE interest
- Software vendors acquiring new capabilities and entering new markets to diversify offerings

Figure 6: M&A's (%) by Focus Areas in CY 2023



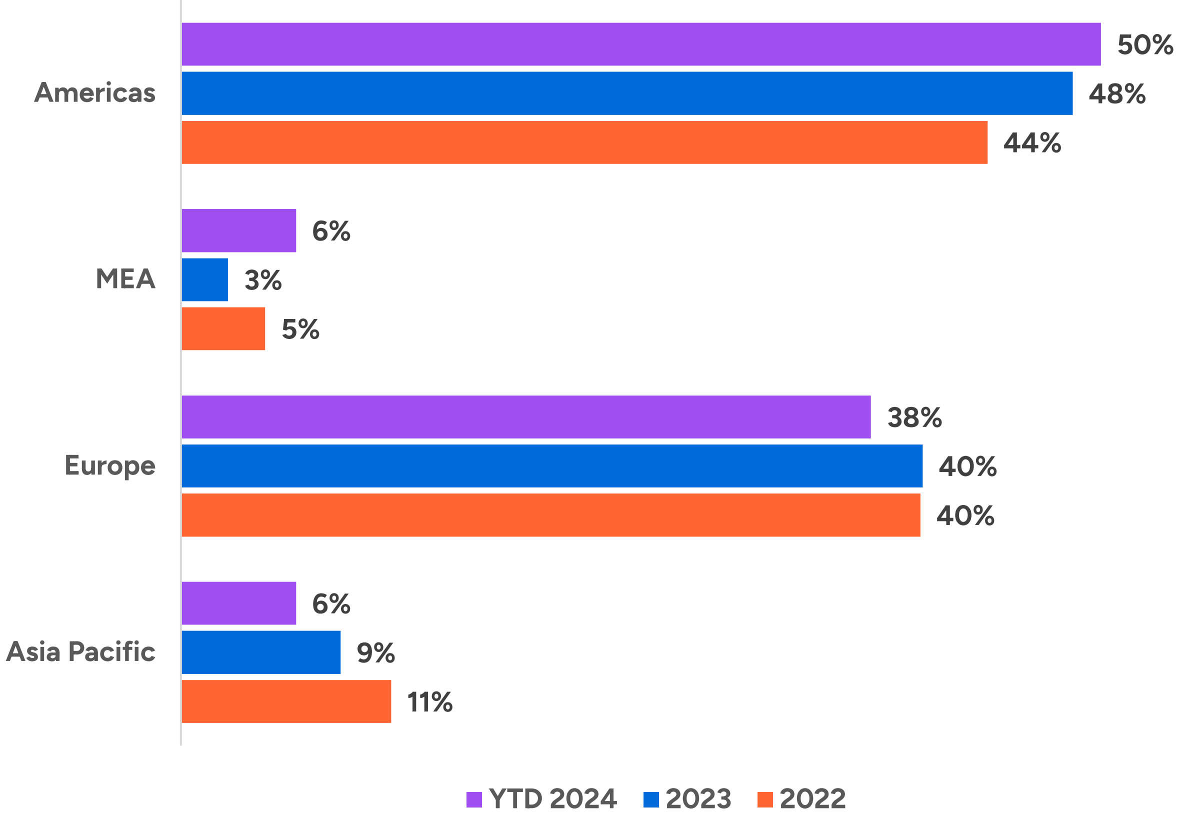
Telecom M&A driven by specialization: Leading with IT & Managed Services, followed by Communications & Networking, and innovative Software & Platforms

Source: [1] Technology Holdings, M&A Tracker 2024

M&A Activity : Geographical Analysis

- **Americas Expand Amid High Rates**: M&A activity grows, with Americas showing increased deal share, resilient to interest rate challenges and macroeconomic headwinds
- **MEA Uptick Signals Opportunity**: In 2024 (YTD), MEA experiences a rise in M&A deals, suggesting a new frontier for telecom investments
- **Europe's Steady M&A Presence:** Europe maintains a consistent share, reflecting a stable investment landscape despite concerns over the global and European economic outlook from continued uncertainty over the war in Ukraine and the impact of it on rising energy costs in the region
- **Asia Pacific Faces Constraints:** Declining M&A deal share in Asia Pacific hints at tightening capital and a mature market

Figure 7: M&A's (%) by Geography - CY 2022 vs CY 2023 vs YTD 2024



Amid economic headwinds, Americas surge in M&A, MEA rises, Europe holds firm, while Asia Pacific contends with market maturity

Key Takeaways

Drivers of Growth for Telecom Sector

- **Telco Capex Sustains Growth**: $290B to $301B from 2016 to 2024, adapting to 5G and IoT demands
- **IT & Cloud Investments Surge:** Enterprise and Hyperscaler Capex soar, emphasizing cloud adoption and infrastructure enhancement
- **Innovation Drives Capex Rise:** AI, edge computing, and cybersecurity investments mark telecom's focus on technological advancement
- **Strategic M&A Amidst Headwinds:** Telecoms engage in cautious yet strategic M&A, navigating economic and geopolitical challenges
- **Telecom Outstrips S&P 500:** Specific telecom indices outperform S&P 500, showcasing sector strength in software and support services
- **Rise of generative AI:** More companies across industries are prioritizing M&A activity that enable them to add tech capabilities and be at the forefront of the AI revolution

Outlook for 2024 and Beyond

- Telcos' bundling to shift to digital services, targeting revenue growth by enhancing subscription management and app-driven customer engagement
- Gaming, AR and Entertainment key to drive 5G consumer revenues
- More use cases of generative AI in Telecom to be Identified
- Telcos to turn ROI-positive on B2B, leveraging marketplaces and CVM to become digital enablers beyond connectivity

M&A Activity

- M&A Drive: Strategic investors acquire AI, mobile tech and cybersecurity companies
- 3,353 M&A deals since 2019 by both strategic and Private Equity investors in almost equal proportion
- Prominent mergers, including Netis Holdings acquisition by Africinvest, Riverbed Technologies by Vector Capital and Mobilecomm Professionals by UST Global

Technology Holdings' Transaction Track Record

Technology Holdings (TH) is exclusively focused on **M&A and capital raising advisory services to Technology Services, Software, Consulting, Healthcare Life Sciences and Business Process Management Companies**. Over 23 years, TH has built deep expertise in digital platforms, with global reach and extensive strategic buyer and private equity relationships to help clients navigate through a sale and/or capital raise process, and to secure premium valuations.

Boutique Investment Bank of the Year Award (2023 The M&A Advisor International M&A Award Winner)

M&A Deal of the Year Award (US $100M –US $250M) (2023 The M&A Advisor International M&A Award Winner)

Cross-Border Deal of the Year Award (2022 The M&A Advisor Award Winner)

Mid-Market M&A Advisory Firm of the Year Award (FM M&A Awards 2022 Winner)

FEB 2024	leonardo	UST (Temasek portfolio company)	BPM and Automation
FEB 2024	aggne	wipro	Insurance Technology Services & IP
FEB 2024	PLATFORMATION	Keensight Capital / servicenow	ServiceNow Consulting & IP
DEC 2024	FOREFRONT	NEORIS (Advent International portfolio company)	Salesforce Consulting & IP
NOV 2024	unifii	inetum (BainCapital portfolio company)	ServiceNow Consulting & Managed Services
NOV 2024	winning	Alan Allman Associates	Management Consulting & Digital Transformation
NOV 2024	CYBER-DUCK	CACI	Digital Transformation Agency
OCT 2024	QUARRY	RTC Partners	B2B Marketing Services & Marketing Automation
AUG 2024	WILLIAMS COMMERCE	NEXT15	Digital Commerce & Digital Marketing
AUG 2024	cloudfy.	NEXT15	B2B SaaS E-commerce Software
AUG 2024	woodridge SOFTWARE	RCG Global Services (Frontenac portfolio company)	FinTech Software Engineering
JUL 2024	VELOTIO	R Systems (Blackstone portfolio company)	Digital Product Engineering
JUN 2024	dek TECHNOLOGIES	endava	Software Engineering, Telco & Embedded Systems

Each transaction above: Has been acquired by

CLICK HERE TO VIEW ALL TRANSACTIONS

TH TECHNOLOGY HOLDINGS

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Consulting, Software & Healthcare

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