CELLHUB | HEALTHCARE



Ty Kircher National Solution Provider Practice Lead









T-MOBILE FOR BUSINESS

NB Ø

MOST 5g SPECTRUM | MIDBAND | 98% U.S.

> 80000 TOWERS | > 300 LEOS

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5G STANDALONE SD CORE



T-MOBILE FOR BUSINESS

5G Network Slicing

LOW BAND

MID BAND



SECURE SLICE WITH SASE







Enhanced Reliability

T-Priority ensures first responders, including medical personnel, have priority access to T-Mobile's 5G network, even during high-traffic situations. This means reliable communication and data transfer when it matters most



Faster Response Times

medical teams can benefit from lower latency and faster 5G speeds, enabling quicker access to critical information and coordination during emergencies



Increased Capacity

T-Priority provides up to five times the network resources available to the average user, ensuring that medical professionals can use data-intensive applications without interruption

When Every Second Counts

T-Mobile T-Priority, designed to provide first responders with advanced connectivity, including the world's first network slice for emergency services on T-Mobile's 5G Standalone Core.

Priority access to those on the front line with T-SIMsecure – SASE to protect against cyber criminals and features like :



T-Mobile Direct Connect Mission Critical Push-to-Talk (MCPTT)





SIM Based Built In Security

offers authentication simplicity and automatic protections for T-Mobile users, per policy, using the T-Mobile SIM—without the need for additional software. T-SIMsecure is supported anywhere on T-Mobile 4G and 5G networks, including domestic and international roaming coverage.



SIM Based Verification using the IMSI (International Mobile Subscriber Identify) and the International Mobile Equipment Identify (IMEI) which are tied to the SIM card or eSIM.



T-SIMsecure automatically authenticates devices and enables SASE based on policy while on the T-Mobile Network

Site to Site IPSEC tunnels encapsulate traffic between the customers' site and the closest SASE service point using ZTNA principles. Only routing traffic destined for the enterprise network.









Clinical Communications

Challenges With Legacy Networks

Delayed Communications | Multiple Devices Reliance on outdated technologies such as pagers , due to poor in building coverage or multiple devices is problematics



Lack of EHR optimization

Many EHR systems struggle to communicate with each other due to differences in software and data standards. This lack of interoperability can prevent seamless data exchange between different healthcare providers, leading to fragmented patient information



Alarm Fatigue

Missed Alarms, False Alarms, Non-Critical Alarms effect clinician's job satisfaction and impact patient outcomes



Interoperability Issues

Legacy and disparate systems hinder communications and data sharing



Communications & Collaboration The Case for 5G



Limited signal strength: weak/dead spots, more radios required, heavily impacted by building materials.

Lower bandwidth: greater network congestion, user contention,

slower/interrupted access to apps and data

BYO security: no native security or control; must add user security, access and control solutions ad hoc

No mobility: no mobility or hand-off capabilities, users experience discontinuous service going in and out of Wi-Fi zones

5G

Superior signal: Stronger signal and more ubiquitous network access for users; ability to provide coverage with macro (public) network and dedicated onprem radios

Higher bandwidth: support for more users with lower latency

Native security: includes native end-to-end security and encryption, along with highly controlled network access

Complete mobility: cellular networks built to support user mobility, no disruption of service across the network and out to the macro network.





Faster Data Transmission

Larger files can be uploaded /downloaded from the EHR



Enhanced Mobile Access

Realtime access to patient data and EHR anywhere anytime and IoT Devices



Network Reliability

Distributed core architecture, where 5G is primary , WIFI secondary



Future Proofing

5G Supports remote patient use case, more AI , Smart Rooms

5GANS

T-Mobile's purpose built 5G network delivered as a managed service provides a future proofed network that scales, is highlight secure and available within the four walls and remote.



California D

ce



Boston Children's Hospital Transforming Clincial Communications and Colloboration

"We knew our current legacy systems couldn't scale. We knew that we needed to shift our clinical mobility strategies, why not do it and why not make sure that we can grow with it, and that it can grow with us." Heather Nelson – BCH CIO

CHALLENGES

- Hospital needed to implement a clinical mobility platform
- Hospital needed to support inbuilding and roaming staff
- Hospital was implementing EPIC driving mobility needs
- Hospital needed reliable & secure coverage over 3M square feet
- Hospital needed to streamline device management
- Hospital needed upgraded DAS
- Hospital needed to monetize existing WIFI investment.

SOLUTION

- Implemented T-MOBILE 5G ANS Private \ hybrid 5G
- 5G Network Slice supports inbuilding and roaming staff
- 5G Supports clinical mobility, alarms, alerts , imaging and data
- Ubiquitous 5G coverage provided all over campus and remote
- Standardized on modern iOS devices provided as Managed Service
- T-Mobile upgraded DAS to support all carriers
- WIFI offloaded to support noncritical apps and be backup



cell

Mobile Solutions For EPIC Enabling Epic Rover, Canto, Haiku and Vocera Edge





Current

Enhanced Connectivity

5G is providing seamless connectivity across all hospitals campuses and remote locations allowing secure reliable access to critical patient data anywhere.

Improved Clinical Communications

5G supports 1000s of devices making it easier for clinicians to collaborate with no dead spots – even in the elevator.

Efficient Data Sharing

5G Enables secure efficient sharing of patient information for real time decision making.

Future

- In Home Patient Care
- **AI Based Prioritization**
- Advanced Medical Workflow

(location aware medical device tracking)





HEAD END T-Mobile to DAS

DAS RACKS T-Mobile to DAS

111





Oberon Small Cell Ceiling Enclosures



5G In Building Network **T-Mobile**

of mobile traffic is generated indoors

External GPS Antenna Line of Sight



Remote Patient Care

Healthcare From Home









Digital Front Door

By implementing a digital front door strategy, healthcare providers can offer more accessible, personalized, and engaging experiences to their patients. This approach not only improves patient satisfaction but also enhances the overall efficiency of healthcare delivery.

T-Mobile 5G provides secure , reliable connectivity to the patient and provider



Appointment Scheduling

Patients can make appoints easier through provided app



Telehealth Services

Patients like the convenience of at home appointments



Patient Portal

Easy access to all records, test results, personalized health information



Mobile Health App

Simple App and Device provided and paid for by health system to patients







Windows 11 will leave millions of PCs behind due to new hardware requirements.

Windows 11 push to become more secure with Trusted Platform Module 2.0 , Secure Boot and a more modern BIOS are leaving older hardware behind.

More modern CPU requirement will see many models even less than 3 years old less compatible

Tier 1 Carrier second line available through an app for smart phone, tablets and laptops separating business & personal communications wherever the employee is.

Doctors and Nurses can engage their clients with secure, compliant, and recorded text, social messaging, and voice calls. Message opt-in and redaction.

Integrated with Microsoft Teams, WhatsApp, & WeChat, with simple admin portal or API management.

Healthcare Communications stay HIPPA compliant with easy integration with your existing archival systems.

Visibility

Lacking true OEM, Software Publisher, and Service provider spend visibility due to complex portfolios

Classification

Lack of or inconsistent classification and categorization of spend

Redundant Purchasing

Redundant and excess suppliers, unmanaged and rogue spending

Functional Gaps

Financial systems lack functionality for needed visibility leading to manual and error prone point in time work

Challenges Your Peers Have With IT Spend

Your organization is not unique in their need for greater visibility and the ability to identify redundancies in IT Spending

CXO Nexus

CIO InCight Visualizer – Category TruSpend®

CXO Nexus

CIO InCight Visualizer – Category TruSpend® { Vendor Spend v. Accounts Payable}

	Accounts Payable				
^	AP Supplier	Amount	^		
	Equinix	63,755,466		1.00	
	Amazon	29,000,882			
	World Wide Tech	26,472,402			
	CDW	24,280,781			
	Dell	22,538,215			
	Red River	15,882,513			
	Verizon	13,096,469			
SUSU	Microsoft	12,453,747			
ALIZE	SHI	11,724,649			End Customer
R	West Corporation	10,591,695			Accounts Payab
-M	Presidio	10,160,260			lists \$7,680,256.0
	Securities Industry Automation Corporation	8,232,709			Million in Cisco sp
	Cisco	7,680,256			
	Tele2	7,409,964			
	Code and Theory	5,908,796			
	SalesForce	5,831,177			
	Penguin Computing	5,822,990			
	Tangoe	5,452,890			
~	Workday Total	5 200 261 571,925,456	~		

CXO Nexus

CIO InCight Visualizer – Category TruSpend® { Cisco }

EM Parent	direct	reseller	Total ▼
Cisco	7,613,474	36,553,951	44,167,42
Cisco	7,682,072	33,753,673	41,435,744
E CDW		16,950,867	16,950,867
🗄 Cisco	7,680,256		7,680,256
🗄 Presidio		6,375,583	6,375,583
Red River		5,461,851	5,461,851
🗄 Tele2	1,004	4,106,773	4,107,777
Dimension Data		568,874	568,874
I NTT		146,512	146,512
🗉 Eplus		68,286	68,286
 Clover Telecom Asset Mgmt 		68,055	68,055
🗄 SHI		6,714	6,714
🗄 Webex	811		811
Cubic Computing		158	158
Meraki Soltn		1,866,951	1,866,951
AppDynamics	-68,598	933,327	864,729
Amazon	28,964,153		28,964,153
Verizon	13,096,469	3,195,561	16,292,030
Total	444,913,397	127,012.059	571,925,45

Network Discovery

Discovery across WAN, LAN, Fiber, Circuits, & IoT Connectivity

Base Line Use & IT Spend

Holistic usage, user experience and spend assessment

Transformation Recommendation

Baseline report with recommendations for technology and cost optimizations

Wireline Network Cost Out Assessment

Reaktr.ai provides network cost out & modernization recommendations through discovery , assessment & remediation services

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Discovery & Assessment **Reducing Cost Through Modernization**

networking and associated costs.

Cellhub in partnership with Reaktr.ai offers a comprehensive discovery, assessment and transformation plan (with execution) to eliminate legacy

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