# TAKE CONTROL OF 5G CUSTOMER EXPERIENCE

ACCEDIAN

With 5G, CSPs are moving from 'best-effort mobile' to proactively managing service quality and customer experience in real time

"In 5G we finally have the framework to define service experience monitoring as opposed to network health monitoring."

Claude Robitaille
CTO, Accedian
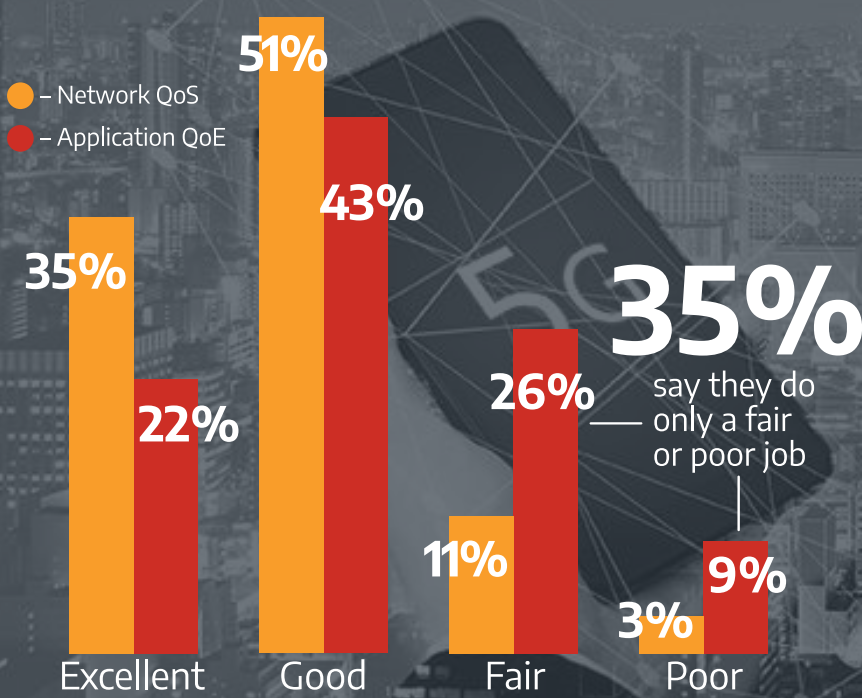
5G rollouts are taking a couple of approaches:
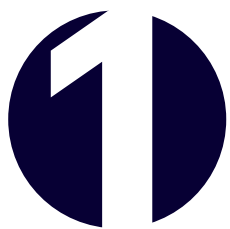
1 Non-standalone: a 5G radio layer is installed over existing 4G core with small cells deployed in high-density cities.

2 Standalone: 5G infrastructure is all-new and separate from existing networks.

Either approach brings radical performance management changes … it's all about managing the 'per-service and application experience'

- Network QoS
- Application QoE

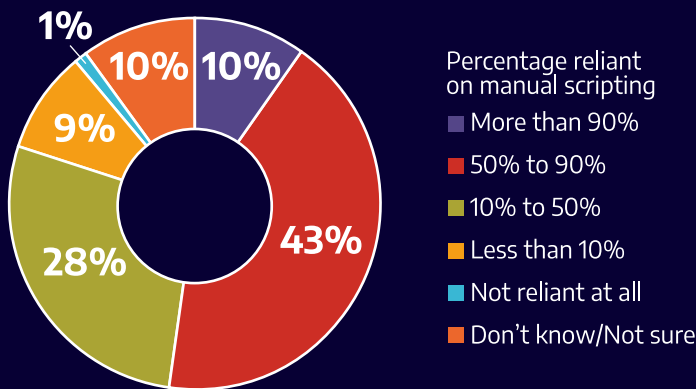|	Excellent	Good	Fair	Poor
Network QoS	35%	51%	11%	3%
Application QoE	22%	43%	26%	9%

35% say they do only a fair or poor job

Only 1 in 5 operators rate their ability to do application QoE as Excellent

Source: Heavy Reading 5G Operator Survey on Performance Monitoring, Autumn 2018

It's a journey to automation – operators rely extensively on manual network performance management today

Percentage reliant on manual scripting
- More than 90% — 10%
- 50% to 90% — 43%
- 10% to 50% — 28%
- Less than 10% — 9%
- Not reliant at all — 1%
- Don't know/Not sure — 10%

10% of CSPs > 90% reliant on manual scripting

43% are 50-90% reliant on manual scripting

Source: Heavy Reading 5G Operator Survey on Performance Monitoring, Autumn 2018

5G services & KPI mapping

Performance level
- Not demanding
- Within LTE specs
- Challenging

Impact if not met
- Low
- Moderate
- High

Class	Type	Throughput REQUIRED	Latency ALLOWABLE	Packet Loss SENSITIVITY	Local Compute REQUIRED	Examples
IoT NB-LTE-M/LTE-IoT allow devices to communicate as rarely as once every 40 minutes	**mMTC** MASSIVE MACHINE-TYPE COMMUNICATIONS					sensors for agriculture, smart meters, connected car insurance, smart city lighting, lackage tracking and logistics
	uRLLC ULTRARELIABLE, LOW-LATENCY COMMNICATIONS					real-time factory automation, remote patient vital sign monitoring, connected car collision avoidance / federated driving
eMBB EXTREME MOBILE BROADBAND	**Real-Time** COMMUNICATION/INTERACTION					video/hologram calling, VR gaming, augmented reality, telematics, fixed line internet replacement
	Streaming VIDEO/MEDIA					UHD 3D YouTube, VR movies & AR sporting events, 8k video
	HTTP/HTTPS Internet/Web Services					content, visuals, client to server-based web applications and basic HTTP/HTTPS connectivity to web

Source: GSMA

What is the ideal 5G performance management solution?

END-TO-END
Visibility and control of customer experience, from the application layer across all network domains, including compute infrastructure.

EDGE
Distributed monitoring and analytics coupled with monitoring of core, access AND cloud assets.

DYNAMIC
Orchestrated monitoring and service assurance that can be easily instantiated to measure service quality and can support a diverse set of on-demand services, applications and slices. ns

AUTOMATED
Intent-based service quality KPIs and automated processes to assure hybrid physical and virtual service components using a cloud-native micro-services platform.

More info at:
takecontrolof5G.com