

# Improvement of Customer Experience through Automated OSS Environment

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# Key Focus Areas

- An overview of quality of customer experience with emphasis on customer service, looking at how to improve complaints, introducing ability to proactively detect how customers are experiencing a specific service (voice, video & data).
- A futuristic approach to improve the customer experience based on Operations Support Systems (OSS), focusing on both network and service performance management.

# Introduction and Background

- “There has been a shift in how executives and leaders invest in the customer experience. Those that are providing the best customer experiences are making significant investments to place the customer at the center of every decision they make.” (Janelle Estes)
- “Customer experience is all about experience management. Great customer experience occurs when you exceed customer expectations in a palpable way. Poor customer experience occurs when you fail to meet customer expectations.” (Jay Baer)
- “Customers resent having to contact the operator repeatedly to get an issue resolved, having to repeat information, and having to switch from one service channel to another.” (Matthew Dixon)

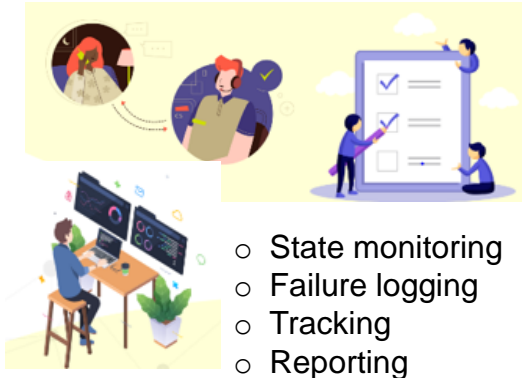


# Deliver Best Experience Across Customer Lifecycle



# Where Operator's are

## **Fault Management**



- State monitoring
- Failure logging
- Tracking
- Reporting

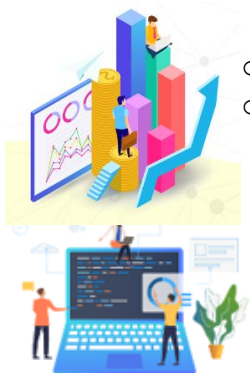
## **Security Management**



- Access control
- Attack detection & alert

## **Network Operation Centre (NOC)**

## **Configuration Management**



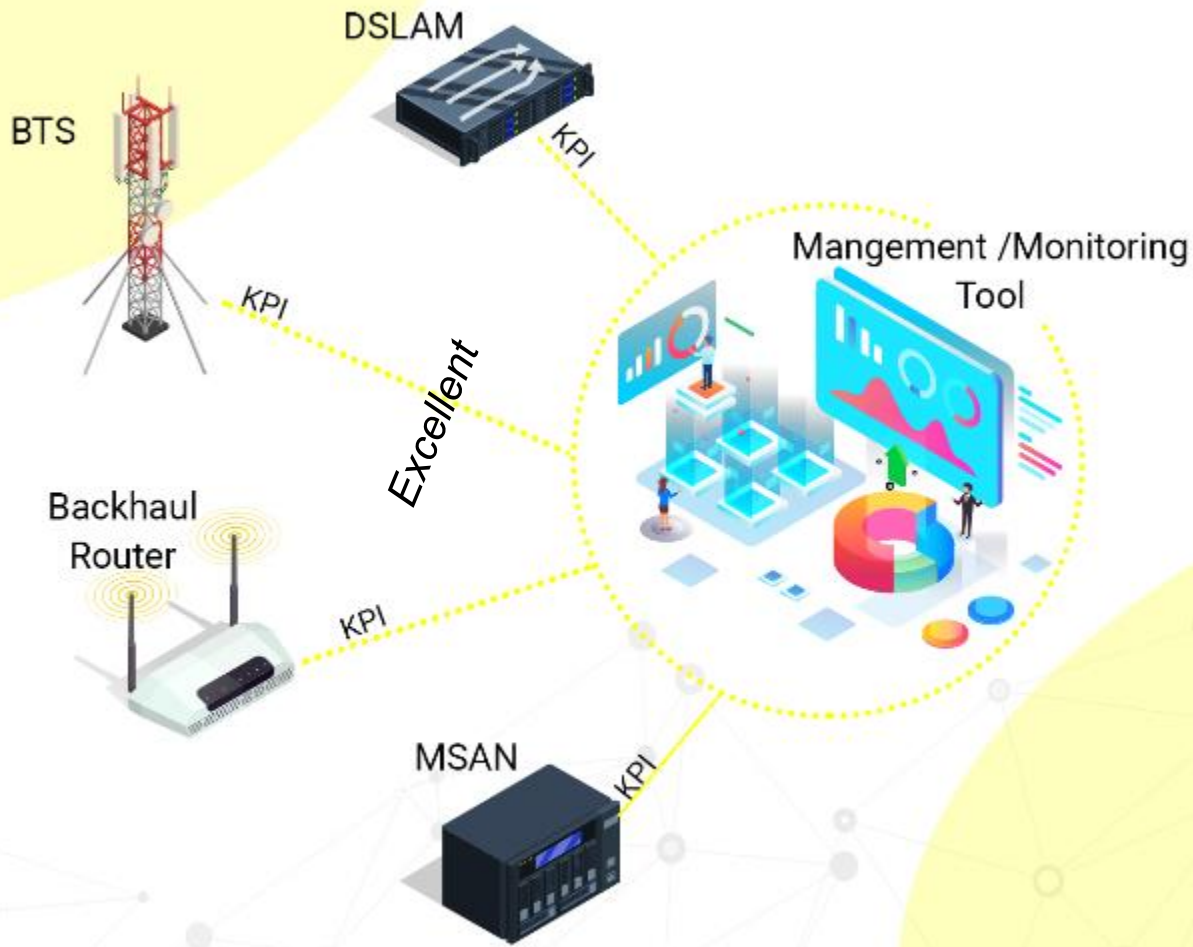
- Device config.
- Version control (compare, apply, rollback, backup)

## **Performance Management**



- KPI monitoring
- Data collection
- QoS

# Where Operator's are



## Sample KPIs for NPM:

- Bandwidth
- Throughput
- Packet loss
- Latency
- Delays
- Jitter
- Error rate
- Reliability
- Security

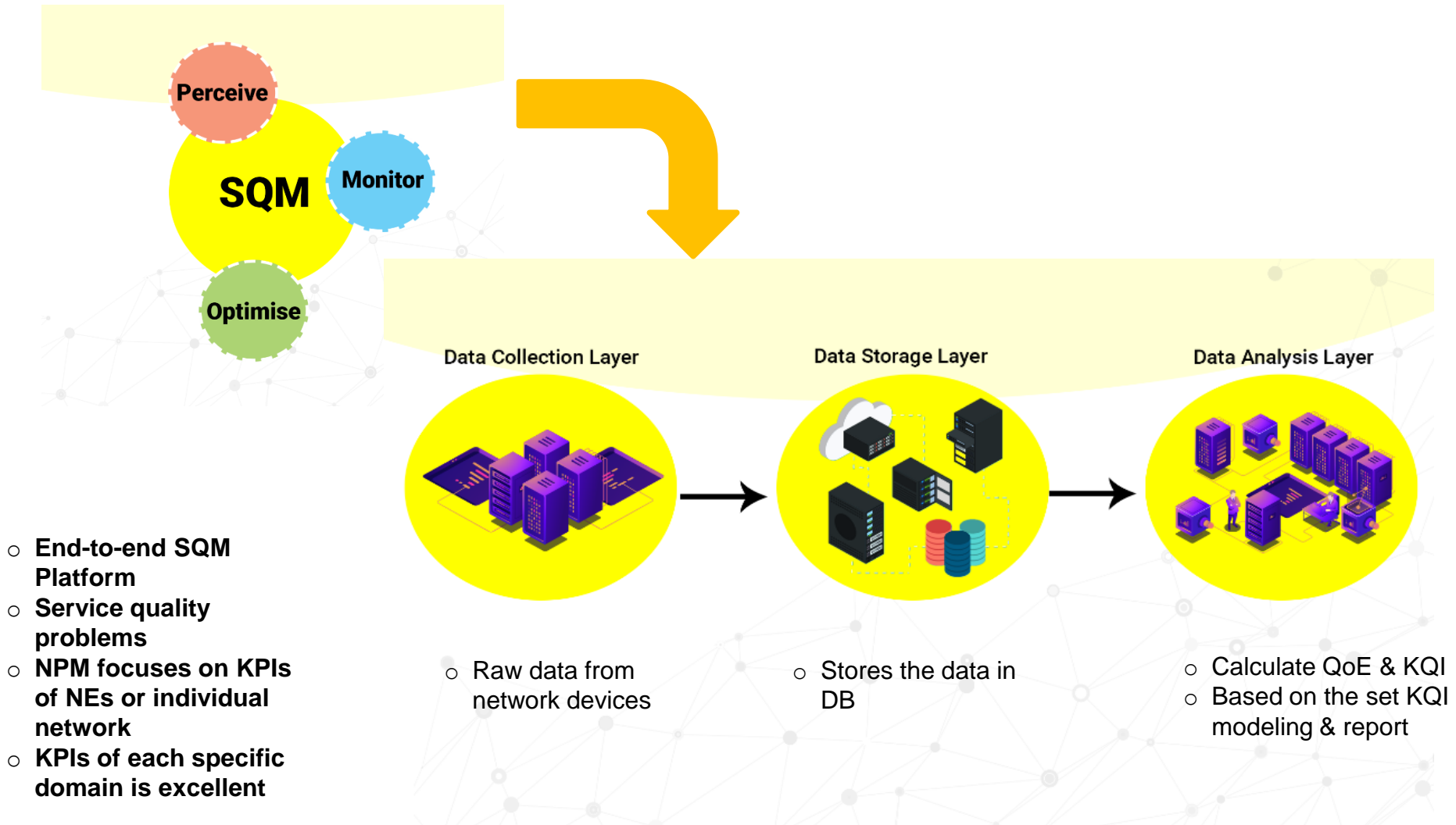
*Why would customers complain poor experience of service?*

# Where Operators want to be



# How can Operator's achieve where they want to be

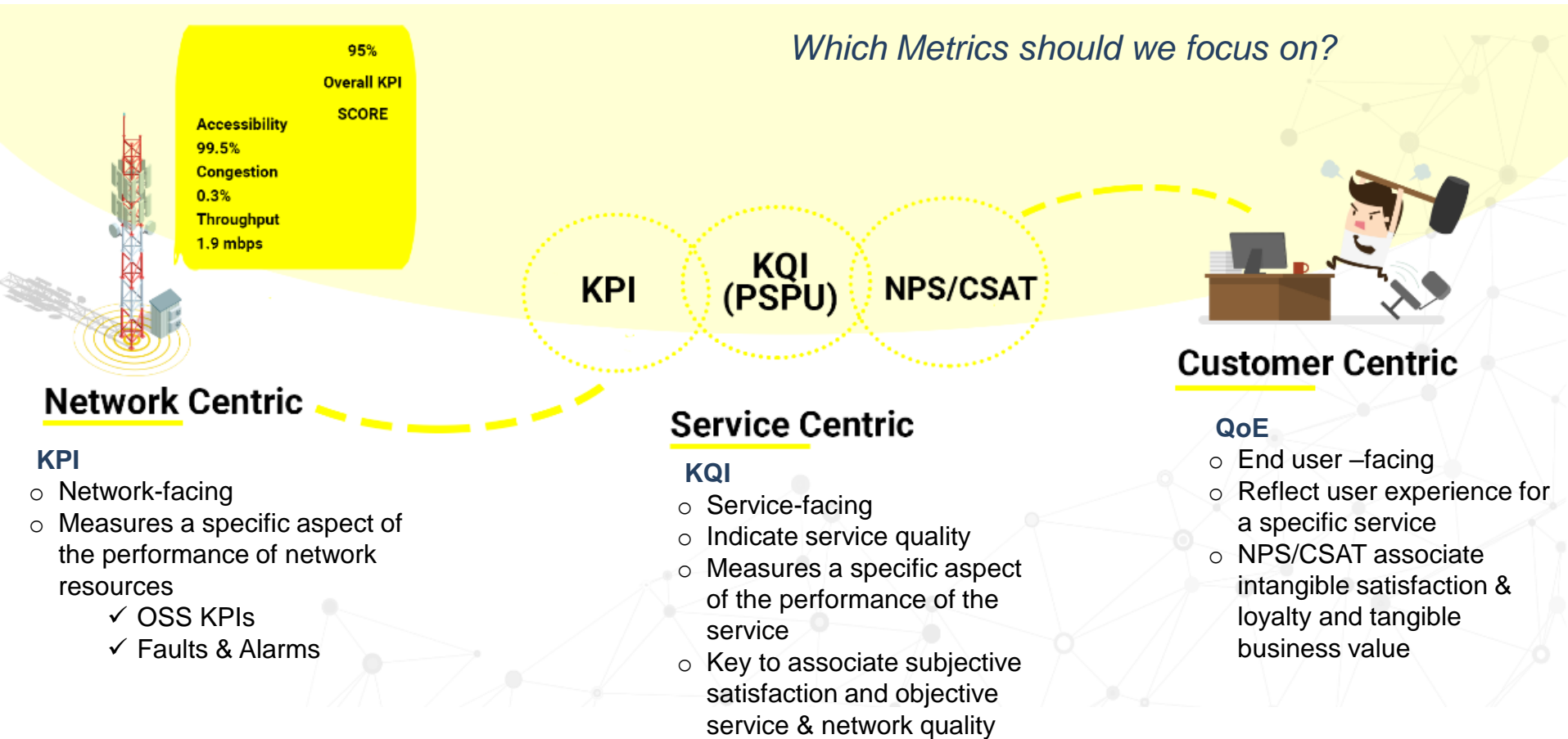
## Service Quality Management





# How can Operator's achieve where they want to be

## Customer Experience Management



*KQIs bridge the gap between Network-Service-Customer Experience*

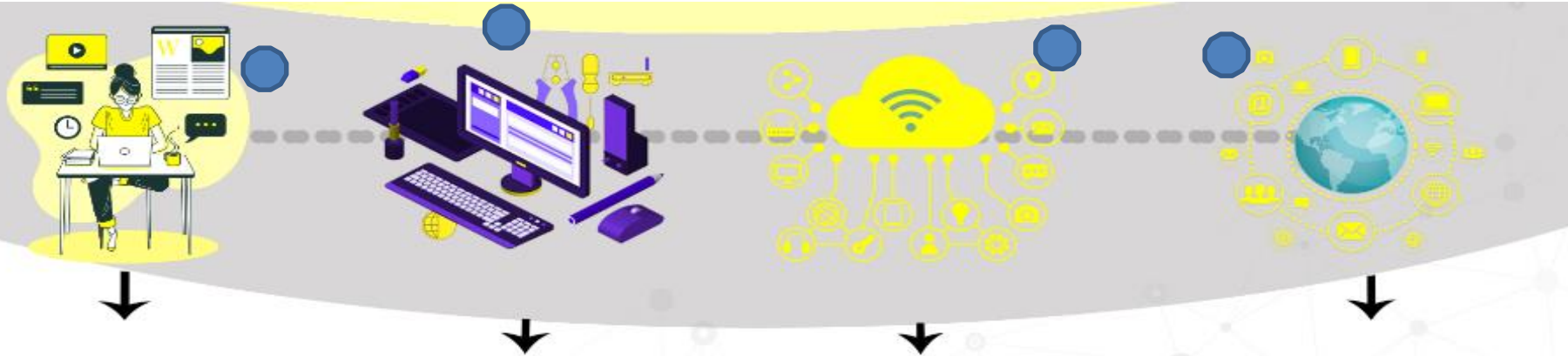
# How can Operator's achieve where they want to be

## KQI Samples

Voice	SMS	WEB	Streaming	Email	MMS	WhatsApp	Facebook
Perceived Call Success Rate	SMS Origination Success Rate	Page Response Success Rate	Video Streaming Start Success Rate	Email Send Success Rate	MMS Send Success Rate	WhatsApp Connection Success Rate	Facebook Connection Success Rate
E2E Call Connection Delay	SMS Origination Delay	Page Response Delay	Video Streaming Start Delay	Email Send Delay	MMS Send Delay	Round Trip Time	Round Trip Time
Perceived Call Drop Rate	SMS Termination Success Rate	Page Browsing Success Rate	Video Streaming Plays Disconnection Rate	Email Send Throughput	MMS Send Throughput	Uplink Throughput	Uplink Throughput
Good Voice Quality Rate	SMS Termination Delay	Page Browsing Delay	Video Streaming Stall Frequency	Email Download Success Rate	MMS Download Success Rate	Downlink Throughput	Downlink Throughput
		Page Download Throughput	Video Streaming Stalled Time Rate	Email Download Delay	MMS Download Delay		
				Email Download Throughput	MMS Download Throughput		

# How can Operator's achieve where they want to be

## Capturing Insight & Measuring Customer Experience



**End User**

**Real Time**

**Per Service Per User  
(PSPU)**

**Big Data Analytics,  
Machine Learning,  
Predictive**

**Fast Network Problem  
Demarcation**

**End Device**

**Subscriber...**

- User Insight & Behavioral
- User segmentation, Usage

**Location...**

- Accessed Location

**Network (OSS & BSS)**

**Terminal...**

- Terminal Insight & Penetration
- Popularity & Trend
- Traffic, Usage

**Time...**

- Terminal, Service, Traffic
- Busy Hour Identification

**ISP/PSTN (Core)**

**Service...**

- Service Insight & Distribution
- Popularity & Trend
- Traffic, Usage

**Experience...**

- Perceived Service Quality (KQIs/QoE)
- Influenced Service & Problem Cause
- NPS (loyalty),
- Churn

# How can Operator's achieve where they want to be

- **Processes**

- ✓ Procedures



- **People**

- ✓ Skills set (IP, IT, Security)
- ✓ Attitude
- ✓ competence



Imagine how Customer Experience would be with such systems, processes and people in place.



# Thank you



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