



Protea Marriot Hotel, Midrand, South Africa

25 – 27 July 2018

Service and Networks Operations 2018 Issues and Recommendations

The following issues were raised by the participants on day 1 during the self-introductions and were captured for discussion on day 2 where solutions and recommendations were collectively proposed for adoption and implementation.

Risk Level	Business Risk Level (BRL)			Business Prioritization (BP)	
	High (H)	Medium (M)	Low (L)	High(H)	Low (L)

#	BRL	BP	Operational Issue (Challenge/Problem)	Solution(s)	Recommendation
1			Conventional Power Failures -	Batteries, Solar Units, Generators	Go green, Environmental Power Monitoring/Remote Power Monitoring, SLA with Power Utilities, Prioritization of ICT, Partnerships with Communities
2			Sustainability of Payphone Services	USF should fund the business	Comply with the Universal Service Obligation
3			Fibre cuts	Diversity, Burying underground, Concrete poles, Compliance	Collaboration with other utilities, Insurance and legal initiatives, Surveillance initiatives, National repository for fibre routes, Alternative infrastructure

					(microwave), media campaigns
4			Copper Theft	Media Campaigns (TV, Radio and Print)	National Laws should enact stiffer penalties for cable thefts equivalent to terrorism
5			Outside Testing Gear and Repairs	Fully equip vehicles, calibrated tools	
6			Training and Skills Development	Hiring the best ad Self learning on the job encouraged. The internet is the best free trainer. Non-Self learners are a risk to the business.	Collaborations with University, Talent retention, Exploration of available facilities, Allocation of funds for development, Exchange programs (free boot camps)
7			Networking Inventory	Automation	Establish task groups, Benchmarking
8			Declining Revenue (ARPU)	Rethinking about the business and sustainability, Radical Opex and Capex Management and optimization. Directing investments to profitable business	All employees should start thinking about cost of their actions, Partnerships with other players
9			OSS/BSS Transformation	Open source software and white boxes is the way to go. People working with OSS and BSS should be open source software experts	Collaborations amongst players and learning from previous mistakes
10			Infrastructure Sharing	Infrastructure sharing should not be confused with giving capacity for free but it's a commercial agreement, Follow industry and regulatory approaches, SADC Guidelines	Co-directed-investments (CDI) for future developments
11			Experience Sharing	Benchmarking and Working Visits	Telkom/Openserve is ready to help other players in the industry on a case by case
12			SLAs Harmonization on KPIs an QoS, On Net and Off Net issues	Enforcement of standardization of SLAs	CRASA to help on harmonization
13			Mutual Recognition	Encourage the establishment of	

				mutual recognition	
14			Tools and Applications		Well calibrated tools together with the knowledge to use them
15			Education, Preservation of Knowledge, Upcoming Talent	Discourage isolated spots of talent and knowledge but encourage companywide knowledge. Those who cannot share are a risk to the business	Inclusion of women and the youth in the business is encouraged
16			E-Waste Management and Recycling	Support National E-Waste Management Strategies	Recommendations from E-waste presentation
17			Women and Youth in ICT	The 38th SADC Summit theme of “Promoting Infrastructure Development and Youth Empowerment for Sustainable Development”, as the 2018/19 Theme was adopted taking forward the SADC industrialization agenda, while focusing on infrastructure development, youth empowerment and sustainable development	Implement nationally the provisions of the theme
18			General Vandalism	TV and Media campaigns for the communities to protect and safe guard Infrastructure	Enactment of laws and enforcement of stiffer penalties
19			Network Outages due to Construction Activities	Cooperation and Collaboration during National Tenders and Projects Approvals	Provision of infrastructure maps and routes
20			Going Green - solar as a solution for power failures, and reducing OPEX	Less power demands for the network	Deploying low power devices
21			Battery Theft	Secure installations, TV and Media campaigns for the communities to protect and safe guard Infrastructure	Concrete structure to house batteries, campaigns about the value of the infrastructure, mark products
22			Staff Issues – keeping them happy	Making staff fully aware of the business and avoiding secrets	Staff engagement as part of the business

23			New OSS/BSS Projects Challenges – not working resulting in reports being prepared manually	Procuring the best (tried and tested), avoiding procurement corruption (up front deals and kick backs). Avoiding technology dumping and test ground	Benchmarking and learning from the best
24			Power Load Shedding	Negotiate with the power utilities for prioritization of feeds into ICT infrastructure	Green Energy, prioritization of ICT players by Energy utilities
25			Slow Technology Uptake	Massive technology campaigns, demos, developing our own Technology Solutions and African lead Initiatives (4 th Industrial Revolution Opportunities – Manufacture Africa and Buy Africa Opportunities)	Explore opportunities from other developing partners
26			Transport Medium Advancement	Technology experts must be exposed to the world trends. Now 400G is being tested and yet most deployments in the region are at 10G, 40G and few at 100G.	Exploration of other avenues – direct buried fibre, reducing CAPEX
27			Battery Life Span, Theft even in Containers	Moving batteries to underground concrete structures	
28			Reducing MTTR	Fully equipped Maintenance Vehicles and up skilling	Making sure that every employee understands that MTTR has a huge impact on the revenue - Whatever an employee touches affects the future revenue.
29			Technology Management from the Infrastructure side	Exposure, self learning at work and home.	Automation, network eyes, Benchmarking
30			Field Fires	Diversity, Clearing	Responsibility is the municipals because they are collecting rentals
31			Rodents	Tight ducts, sealable manholes	Partnership with manufacturers on the best raw materials

32			Network Changes	Authorized changes and documented online or on paper	Centralized database for network configurations and changes
33			Slow Internet due to Migration and Transformation	Fix the routing and having an eye/view of the IP traffic	Implement network view
34			International Trade Issues – USA-China affecting business from Africa	Diversification in terms of vendors and reduce vendor dependency	Reduce vendor dependency, Open source and white boxes is the future
35			High Demand for Services	Good for the business and pricing should support business sustainability	Services/Network development and expansion
36			National Developmental Targets	Participate in Developmental forums	
37			New Procurement Acts causing delays	Smart procurement approvals done 12 months in advance	Lobbying the procurement authorities for better practices and rules
38			Lack of Skills in IP	Self learning, up-skilling and partnerships with relevant institutions	Every employee should understand the IP world
39			Supplier SLAs not tight		
40			Unionized Business Environments	Make sure that every employee and the unions are fully aware of the business and do not keep secrets	Make the unions be part of the business
41			OTTs Encroaching into Operational Areas and Role of Governments	Need to relook at the business because the OTTs are exploiting the service areas being neglected by the operators and service providers	Partnerships with OTTs
42			Co-Sharing Infrastructure with other non ICT Infrastructures Sectors	All players should contribute to the implementation of guidelines on fair cost of using existing sharable infrastructure	All players should collectively address the reduction of cost of producing ICT services. For example what will it cost to produce a minute of a voice call or 1MB/s of Internet whether fixed or mobile?
43			Waste of National Financial Resources Utilization (Public and Private Sources)	The source of funds is immaterial but all add up to national resources which should be invested and used optimally	Public and Private Sector National Projects should be streamlined and coordinated at

				for the benefit of the countries	the National Level
44			Industry Cooperation, Partnerships and Collaboration	Growth of the industry requires cooperation (C), partnerships (P)and collaboration (C)	CPC should be implemented at both national and regional levels. For example SATA is a product of CPC.
45			Monopolistic Suppliers	Network and Skills Diversification	Support and adopt Open source and white boxes where possible
46			Network Uptime and Failures	Increase uptime and reduce failures by proactive management through automation	Reduce human invention
47			Transformation and Migration Strategies	Migrate with the world and don't be left behind	Legacy networks are expensive in the long run
48			Skills and Resources Deployment	Discourage isolated spots of talent and knowledge but encourage companywide knowledge.	Those who cannot share are a risk to the business
49			Up skilling	It's a must for every employee and self learning using the internet is the best	Instill a culture of self learning
50			Restructuring of Network Management – from Standalone Element Managers (NMS)	XML based and using open source software and off the shelf white boxes	Customization - Reduce the Capex and Opex for network management through open source
51			NOCS and SOCS Integration	Combined the functions and reduce cost	Smart network management – Network Function Virtualization
52			VoIP Business	Migrate all voice to VoIP	
53			Business Digital Transformation	Integrate digital technology into all areas of a business resulting in fundamental changes to how businesses operate and deliver value to customers.	Develop a cultural change that requires the organization to continually challenge the status quo, experiment often, and get comfortable with failure.
54			Links to Costal Internet Gateways Failures and QoS	Capacity on Demand SLAs and SDN Solutions – Self healing	Bundle requirement into the contracts

55			Interconnection billing and Settlements in USD \$	Adopt flexible settlements as guided by the regional central banks agreement	Consider local regional currencies and CTSA 2019 should explore multi-party net settlements as flexi-clearinghouse
56			Customer Procured CPE Failures – e.g due to lightning and power surges	CPE Insurance Schemes	Customized locally manufactured CPE
57			Bandwidth Management and Shaping	Deployment bandwidth management tools	Bandwidth should be allocated priced depending on customer requirements
58			Net Neutrality	Net neutrality is no more an issue	Prioritized and guaranteed traffic should be charged a premium
59			National and Regional Developmental Agendas – Digital SADC 2027, SA2030, Agenda 2063	All industry players should have and read these documents and include the provisions in the business developments	All industry players (Public or Private) not by choice must support national and regional developmental agendas by including the agendas into business activities
60			Inter-Regional SLAs	The SLAs should be balanced	SATA should solicit CRASA for supporting harmonization of the SLAs
61			Dark Fibre Competition and Capacity Swaps	Utilization of spare capacity to generate revenue	Co-directed investments
62			Integrated OSS and BSS	Converged OSS BSS Solution offers an optimal choice to transform the business	BSS, OSS out of Box For a Convergent Service Network
63			Powering of MSANs – Stability of Power Supply	Partnership will business in the local communities for alternative power sources as a backup	Go green, Environmental Power Monitoring/Remote Power Monitoring, SLA with Power Utilities, Prioritization of ICT, Partnerships with Communities
64			Big Data, bit coin, block chain	Consider and Experiment with bit	Adopt the best and

				coin, big data and block chain in the business	recommended approaches
65			Rethinking of Operational Business Models	Business Digital Transformation	Use the best and recommended approaches
66			MEF 3.0 Certification	Consideration for certification	Exploration of product certification in ways of boosting customer confidence
67			Networking Tools, Simulators and Emulators	All experts encouraged to develop hands experience	Most of the simulators and emulators are open source
68			Legacy Technology	Migration from legacy platforms	Catch up with the world
69			IP/MPLS	Consider implementation benefits	IP Class of Service Considerations
70			Online Networking Labs	All experts encouraged to learn using online labs	The Industry should establish learning and testing platforms