Actix smart capacity service

The 5G era brings tremendous opportunities for communications service providers. But to capture the full benefits, it requires significant network investment. A key target area is capacity management – i.e., maintaining the best network performance in a cost-effective manner. The reason is the increasing demands of mobile data and voice, due to climbing network service usage and interconnectivity requirements – leading to a growing strain on both existing LTE networks, as well as the operational processes that support them (e.g. planning, engineering).

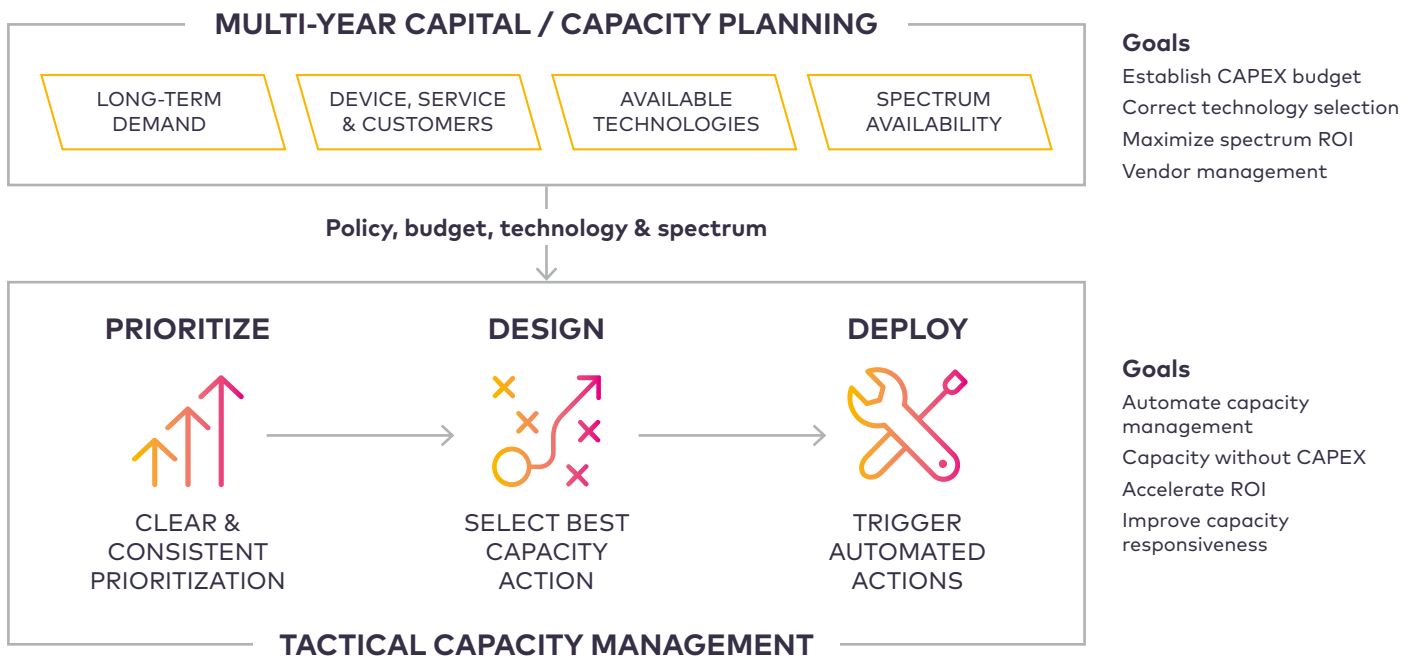## Service providers therefore face a host of challenges:

- **Bias towards investment:** Typically, capacity challenges are met with the need to expand the network infrastructure, resulting in additional network investment and deployment delays. But ideally, service providers should be able to validate if investment is really required or if network configuration can be optimized to deliver the required capacity. Usually, they do not have the tools to do so

- **Determination of network investment focus:** With limited budgets and the need to constantly evaluate ROI, operators must identify the areas where investment makes most sense

- **Getting the right technology mix:** Determining what mix of spectrum and technology will best enable the ability to deliver the right capacity, based on demand and device capabilities, (e.g. "should I move to 5G now or expand 4G?"; "are 3G-only devices slowing my move to LTE?")

- **Lack of warning on capacity exhaustion:** Long-term planning fails to account for short-term issues caused by unexpected events and behavioral changes

- **Short term challenges:** For example with COVID-19, enabling fixed wireless access (FWA) and wireless to the home (WTTH) can impede network performance of already underperforming cells, such as in suburban locations, where network architecture and the throughput do not support the demands of WFH connections

- **5G monetization and IoT business models:** Uncertainty caused by new IoT demand patterns and connectivity requirements must be effectively handled

- **Poor long-term impact insight:** A clear and consistent prioritization approach requires a multi-year view of how demand and QoS will shape network requirements

- **Impact on 5G core and transport:** Transport of mobile traffic requires upgrading and re-architecting, since physical infrastructure evolves on 5G small and macro cells, as well as MIMO antennas

The solution: ROI-driven investment prioritization

Actix Smart Capacity automates the complex task of prioritizing and selecting the right network capacity investments to maximize customer impact and ROI, while also delaying CAPEX through optimization. It achieves this by providing support for multiple business scenarios – from ongoing capacity management of GSM/UMTS/LTE networks through to network densification to establish 5G deployment.

The solution delivers ROI-driven investment prioritization, automated capacity recommendations and integration into engineering and workflow systems (such as Amdocs Network Rollout Solution), thereby accelerating the capacity management process. The solution also includes a scorecard functionality.

Capacity management goals

MULTI-YEAR CAPITAL / CAPACITY PLANNING

- LONG-TERM DEMAND
- DEVICE, SERVICE & CUSTOMERS
- AVAILABLE TECHNOLOGIES
- SPECTRUM AVAILABILITY

Goals
Establish CAPEX budget
Correct technology selection
Maximize spectrum ROI
Vendor management

Policy, budget, technology & spectrum

PRIORITIZE → **DESIGN** → **DEPLOY**

CLEAR & CONSISTENT PRIORITIZATION — SELECT BEST CAPACITY ACTION — TRIGGER AUTOMATED ACTIONS

Goals
Automate capacity management
Capacity without CAPEX
Accelerate ROI
Improve capacity responsiveness

TACTICAL CAPACITY MANAGEMENT

An "optimization-first" approach

Actix Smart Capacity's optimization-first approach ensures existing network assets deliver maximum capacity, while at the same time, identifying optimal sites for upgrades and new cell placements, thereby accelerating revenue and maximizing ROI.

Site	Technology	Vendor	Capacity Category	Capacity	Traffic	LTE Load DL 4W	Revenue	Neighbour Revenue	Configuration	Optimize	Add Carrier	Investment	Horizon	ROI ^	Status
S01SIGJA01	LTE	Ericsson	Corrective	75	27.935	126.23	R$ 119.806	R$ 133.982	LTE 700/1800/2600	Yes	Yes	Yes	Now	11	In Deployment
ESIBER09	LTE	Ericsson	Corrective	75	16.812	163.21	R$ 51.162	R$ 40.806	LTE 1800/2600	Yes	Yes	Yes	Now	17	Plan Approved
S01SIRIB32	LTE	Ericsson	Corrective	69	10.498	82.58	R$ 40.868	R$ 47.269	LTE 1800/2600	Yes	Yes	Yes	Now	18	
S01SIRBH37	LTE	Ericsson	Corrective	76	11.893	79.01	R$ 41.189	R$ 68.020	LTE 700/1800/2600	Yes	Yes	Yes	Now	18	

Clear Capacity KPIs & Scoring
Balanced capacity KPIs complement existing KPIs to provide a clearer / stricter view of available capacity.

Flexible Action Prioritization
Prioritize actions on revenue potential, readiness of subscribers or impact on VIP / enterprise customers.

Best Capacity Action Playbook
Automated investment and optimization recommendations customized to CSP's technology and spectrum.

Exhaustion & ROI Forecasts
Continuous forecasting of capacity exhaustion horizons for every sector, combined with revenue to generate ROI.

Workflow & Tool Integration
Trigger automated actions: parameter changes, RF shaping, cell placement and deployment workflows.

Automated & Continuous Capacity Analysis

Impact

Impact	How	Customer Impact
Automate Capacity Management 40-80% acceleration	Replace manual Excel-driven analytics process with automated platform	Tactical capacity management process automated to run continuously
	Perform systematic optimization and investment checks across whole network without engineering	15% of sites requiring investment were flagged for capacity optimization first
Capacity without CAPEX 10-20% reduction	Reduce unnecessary investment due to improved capacity visibility	20% of sites recommended by a vendor were not close to capacity (CALA customer)
	Defer / delay CAPEX by mandating 'optimization-first'	Achieved 10% reduction in 1800 band congestion, thereby reducing the need to invest (APAC customer)
Accelerate ROI 40% CAPEX has < 1 year ROI	Prioritize network expansion that has lower ROI	Only 40% of requested CAPEX realized ROI within 12 months
	Optimize capacity utilization to maximize revenue per site	54% of site expansions were found not to be needed for 6 months and investment could be delayed (APAC customer)
Short-term capacity mitigation Week-to-week tracking	React quickly to unexpected network capacity demands through continuous analysis	Received guidance from Amdocs on short-term optimization options to resolve capacity issues during COVID-19 crisis (NA customer)
Effective capital planning	Establish when and where capacity will be needed based on long-term subscriber evolution	Three-year capacity plan established (NA customer)

Why Amdocs

Amdocs' vendor-independent practices, tools and approaches simplify service providers' key network tasks, leading to significant capex reduction.

We support the industry's first production environments for ONAP, helping operators transform their physical networks into agile ones. This improves time to market for new services, thereby improving ROI for both physical and virtual networks.

We have a proven track record supporting 5G projects for all phases of network rollout and densification, including but not limited to RAN, transport and core design, provisioning and troubleshooting services, pre-/post-launch optimization, as well as provisioning and triage for multi-vendor, multi-technology heterogeneous networks. As the preferred partner for Tier-1 and Tier-2 service providers across the globe, we leverage our vast complex configuration integration experience as part of a holistic approach towards network management. In us, you gain an innovative partner in the development and delivery of industry-transforming technologies and services.

For more information, visit:
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