

PROACTIVE NETWORK CAPACITY MANAGEMENT AND OPEX AND CAPEX OPTIMIZATION

## NETWORK PLANNING & DESIGN

### BUSINESS CHALLENGE

The overwhelming expansion of next-generation, content-rich services is creating a massive increase in consumer demand for data services — and as a result — is causing significant traffic overloads. Communications Service Providers (CSPs) are facing an urgent need to extend their networks, and this requires correct and timely actions at all stages of network planning, design, build-out, and maintenance.

Accurate trending and forecasting are essential for proactive projection of market demand and anticipation of network upgrade needs. Tracking and analysis of network statistics, performance parameters, and capacity utilization trends, therefore, are crucial for timely network change planning.

“*The breadth and depth of NetCracker’s solution and technical expertise will take our operations to an advanced level, one consistent with our 3G and future network deployments. We will now be able to deploy the innovative, high-quality, personalized services our customers demand with reduced cost and faster time-to-market.*”

*Marwan Hayek,  
Vice President  
for Technology, Mobinil*

The planning stage is essential to lay the groundwork for a network expansion that meets all the requirements identified in the network data analysis phase. At this stage, the most efficient ways of extending the network need to be defined, and various network extension plans need to be synchronized in order to create subsequent design versions.

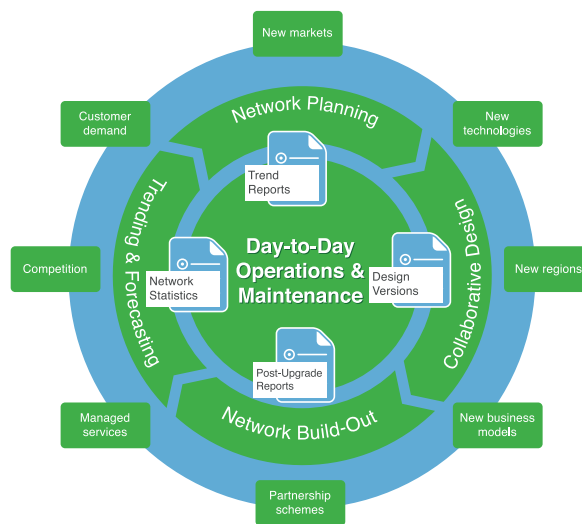
The design creation stage is a long and complicated enterprise that involves many participants. A collaborative design plan

requires joint input on the part of many of a CSP’s resources in order to generate multiple design versions, analyze and compare the designs, make improvements, and ultimately, select the best one.

The network build-out stage is also challenging and requires thorough project management along with effective work

order and supplier orchestration.

To carry out all stages of a network expansion successfully, CSPs need a comprehensive planning and design solution that will enable them to proactively analyze network usage, forecast capacity requirements, and expand their networks so business stability and profitability are increased.



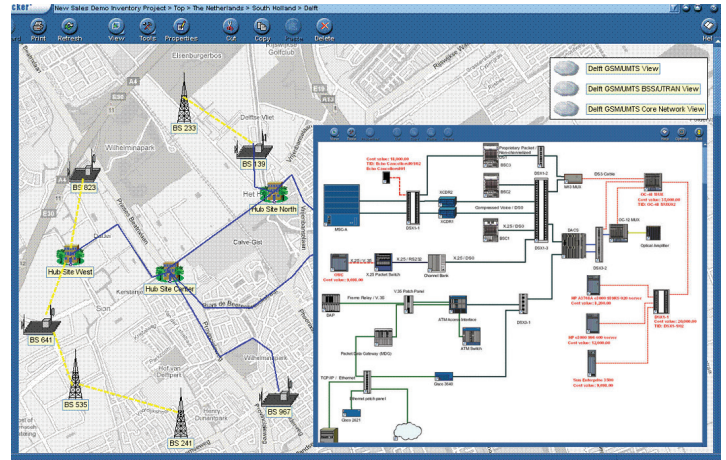
NetCracker’s Network Planning & Design — part of the NetCracker Resource Management offering included in the Telecom Operations and Management Solutions (TOMS) Suite — is pre-integrated with Network Management and Service Fulfillment & Assurance solutions and gives CSPs a comprehensive set of capabilities to plan, design, and develop network changes and upgrades.

# DETAILS

NetCracker's Network Planning & Design provides a comprehensive set of capabilities to plan, design, and develop changes and up-grades for various network technologies including: next-generation optical, HFC, xPON, xDSL, IP, MPLS, VLAN, VPLS, mobile (GSM, UMTS, CDMA, LTE, WiMAX), Wi-Fi, Metro E, microwave, and satellite.

Network Planning & Design enables a full set of structured activities for effective network extension, including statistical analysis and capacity demand forecasting; trend-based network planning; collaborative design creation; and consecutive network build-out.

NetCracker's Network Planning & Design includes Network Trending & Forecasting, Network Planning, Network Design, and Network Build-Out:



## NETWORK TRENDING & FORECASTING

**Network Trending & Forecasting** provides analysis and reporting capabilities for monitoring network statistics and forecasting demand:

- Capacity utilization trends (e.g. ports, addresses, facilities)
- Network planning reports (e.g. by location, date, element)
- Service fulfillment and network development statistics

## NETWORK DESIGN

**Network Design** facilitates collaboration among network planners, designers, and engineers by providing them with tools such as:

- Design and approval workflows
- Version management (including comparison and mergers)
- Advanced GUI design capabilities with version highlighting

## NETWORK PLANNING

**Network Planning** enables overall network extension management from demand to roll-out and facilitates selection and approval of the most suitable plan:

- Up-to-date, as-built, network configuration models
- Tracking and synchronization of multiple extension plans
- Flexible dependency rules, comparison by time, cost, etc.

## NETWORK BUILD-OUT

**Network Build-Out** streamlines step-by-step network extension and enables effective third-party management:

- End-to-end project and work order management
- Generation of design document packs
- Integration with Workforce Management to orchestrate CSP and supplier workforces

# BENEFITS

**NetCracker's Network Planning & Design enables CSPs to:**

- Coordinate trending, planning, design, and build-out activities through one system to minimize capital expenses and optimize network usage while ensuring continuity of service delivery
- Analyze trends in network usage to remedy potential capacity shortages in a timely manner that prevents SLA violations
- Select the most appropriate network extension plan through extensive rule-based comparison capabilities
- Design alternative implementations of networks, supporting new services through unified, comprehensive network models
- Manage third-party relationships for coordinated network extension through pre-integration with NetCracker's Workforce Management