NetWorks

**Analysis, Planning and Optimization Software
for Telecommunications Networks**

Product Portfolio

DETECON
CONSULTING
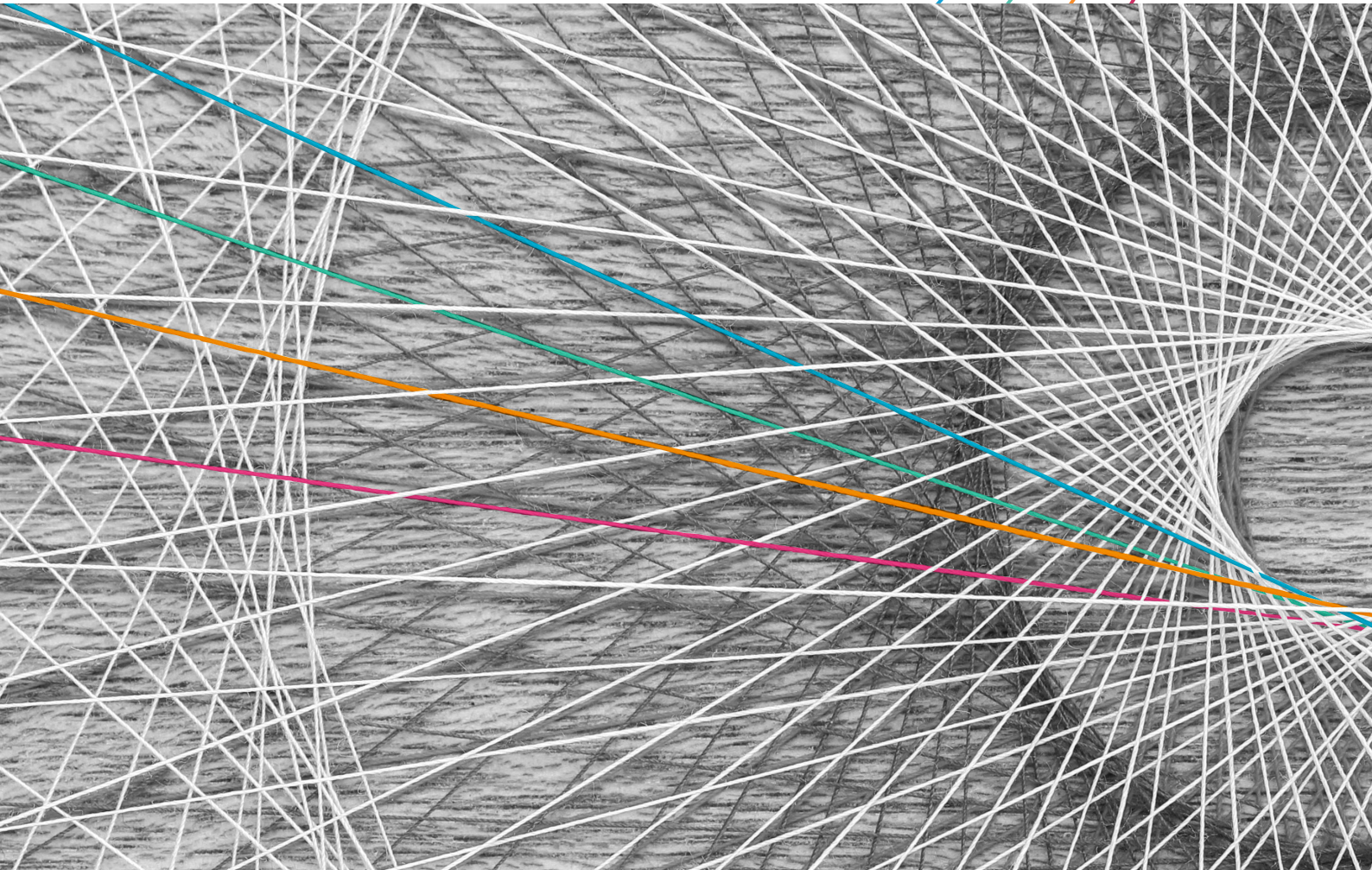
The Software

In order to be successful in today's competitive markets, it is vital for network operators to design networks as efficiently as possible and at the lowest possible cost. The planning, optimization and documentation of networks are highly demanding tasks both for operators and for system manufacturers.

With the NETWORKS product line, Detecon offers an integrated solution for analyzing, planning, optimizing and documenting today's telecommunications networks.

NETWORKS provides extensive support during the status-quo analysis of your network, during the conceptual network design and in preparing strategic decisions especially those which influence the network costs. Performance and reliability of the network are considered as essential conditions. NETWORKS relieves

you of tedious and error prone manual calculations, and gives you more time for planning efficiently and for comparing different network scenarios.

The software is focused on technological aspects during network planning, and the device configuration. NETWORKS provides many functions needed for detailed technical planning and for the automated documentation of the network elements. The retrieval of the current state of the network at any time is critical if your work is to match the current and future requirements of your telecommunications network.

NETWORKS allows you full control over the planning steps e.g. each intermediate result can be checked and edited. Key features of all the NETWORKS products are a uniform, efficient and very flexible model and data management and a user-friendly graphical interface.

Set screws for an optimal network

Analysis, Planning and Optimization Software for Telecommunications Networks
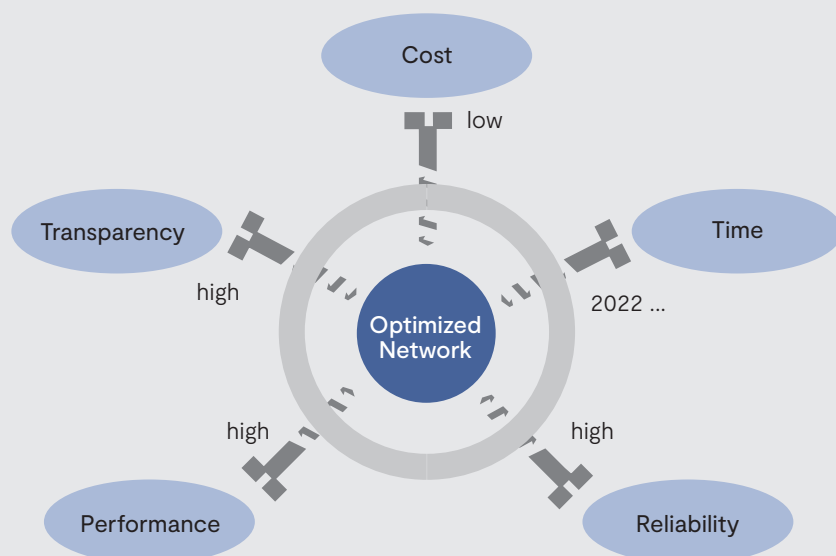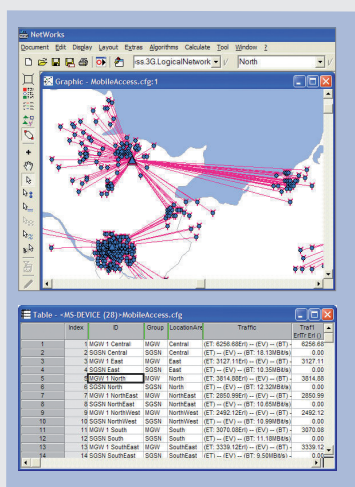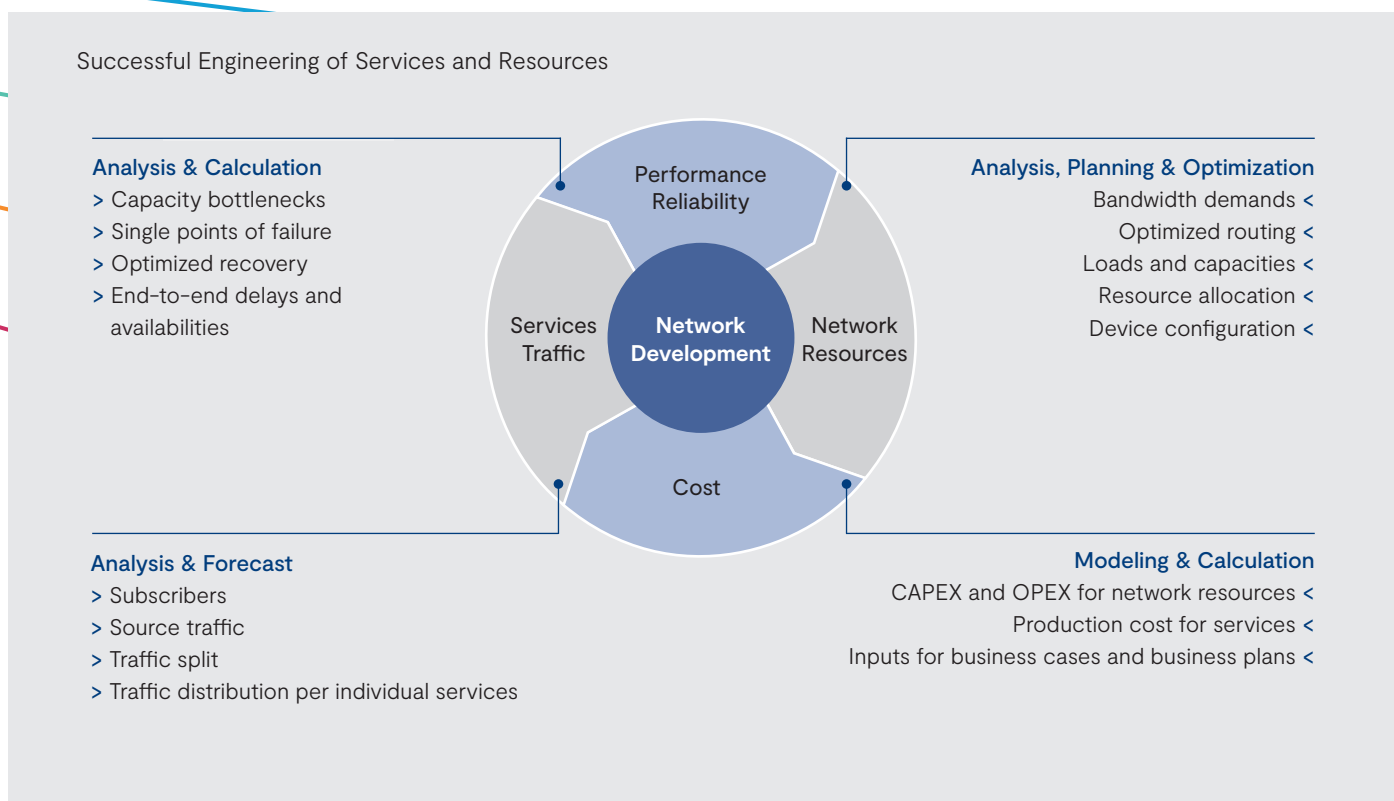
Our Know-How

An understanding of the success factors of network development is vital if the associated investment strategies and technology implementation are to be successful.

Detecon's software benefits from the comprehensive expertise of the development team and from the experience gained in various international consultancy projects.

Our clients confirm this: a large number of international players in the telecoms market have been using NETWORKS successfully for more than 15 years. Network operators and system manufacturers alike appreciate the extremely flexible and user-friendly software since it gives them the capacity to plan and optimize a broad range of telecommunications networks. NETWORKS offers an outstanding cost-benefit ratio through its ability to be rapidly customized for a given clients network.
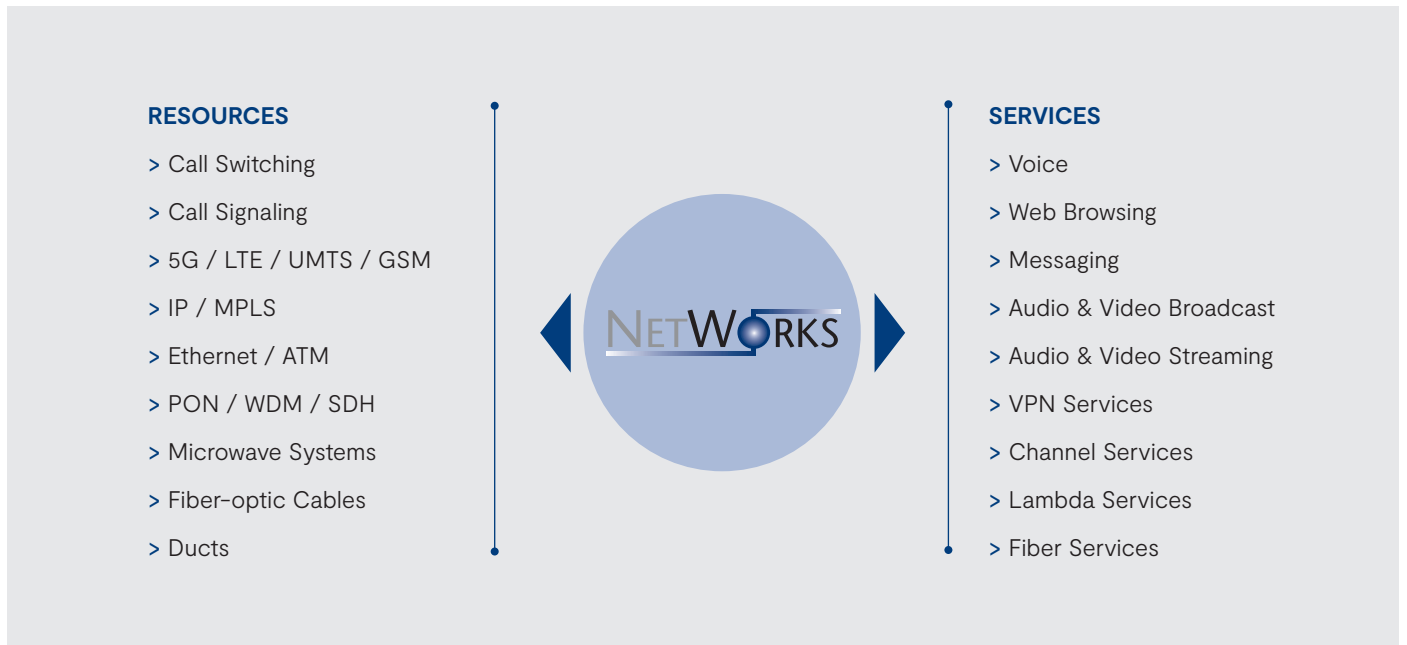
Your Benefits

> Improved network performance and reliability

> Reduced and balanced CAPEX and OPEX of network resources

> Lower risk of service degradation

> Accelerated decision processes for network development

> Achieving high level of network transparency

> Reduced effort on analysis and planning work

> Future-proof modular software system for the planning department

Successful Engineering of Services and Resources

Analysis & Calculation
> Capacity bottlenecks
> Single points of failure
> Optimized recovery
> End-to-end delays and
   availabilities

Analysis, Planning & Optimization
Bandwidth demands <
Optimized routing <
Loads and capacities <
Resource allocation <
Device configuration <

Performance Reliability

Services Traffic

Network Development

Network Resources

Cost

Analysis & Forecast
> Subscribers
> Source traffic
> Traffic split
> Traffic distribution per individual services

Modeling & Calculation
CAPEX and OPEX for network resources <
Production cost for services <
Inputs for business cases and business plans <

Product Portfolio

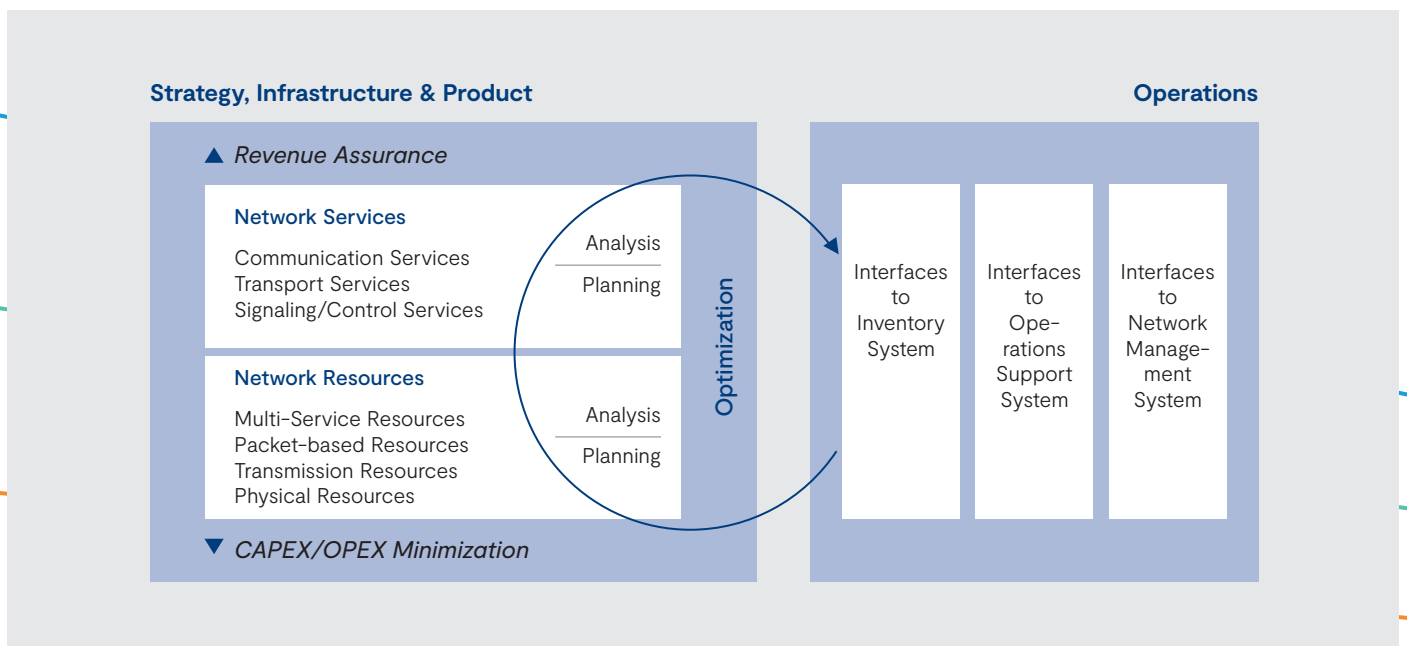# The Focus

The NETWORKS product family addresses the comprehensive analysis, planning and optimization tasks to be applied in current and future telecommunications networks.

RESOURCES

> Call Switching

> Call Signaling

> 5G / LTE / UMTS / GSM

> IP / MPLS

> Ethernet / ATM

> PON / WDM / SDH

> Microwave Systems

> Fiber-optic Cables

> Ducts

SERVICES

> Voice

> Web Browsing

> Messaging

> Audio & Video Broadcast

> Audio & Video Streaming

> VPN Services

> Channel Services

> Lambda Services

> Fiber Services

NETWORKS

Detecon understands the service and infrastructure optimization cycle in its entirety, from analyzing real–network data to planning cost–minimized networks.

Strategy, Infrastructure & Product

Operations

▲ *Revenue Assurance*

Network Services

Communication Services
Transport Services
Signaling/Control Services

Analysis

Planning

Network Resources

Multi-Service Resources
Packet-based Resources
Transmission Resources
Physical Resources

Analysis

Planning

Optimization

Interfaces to Inventory System

Interfaces to Operations Support System

Interfaces to Network Management System

▼ *CAPEX/OPEX Minimization*

Analysis, Planning and Optimization Software for Telecommunications Networks

Our Product Range

The NetWorks product range benefits from a unified multi-layer concept that is applicable to multiple technologies and services.

Analyze, Plan and Optimize Next-Generation Transport Networks
with IP/MPLS, Ethernet, TDM, WDM and OTN technologies on fiber-optic, copper and wireless media

This comprehensive product meets the requirements of network operators with converging IP, Ethernet and transmission layers. It also covers the cable and duct network planning.

Analyze, Plan and Optimize Fixed Access Networks
with FTTx, HFC, PON, Ethernet and DSL technologies on fiber-optic and copper media

This product is focused on network operators' needs in outside plant planning, with enhanced functions for the cable and duct network planning.

Find an Optimal Access Strategy
with strategic rollout planning for LTE, GPON, HSPA+ and DSL.

This dedicated product is focused on elaborating long term strategies considering local constraints defined by marketing, competition and available technologies.

Monitor Capacity Utilization for Mobile Access Networks
with access network extension planning based on measurement analysis and traffic forecast.

This dedicated product addresses network operators' need in identifying critical resources in the current network and in planning necessary network expansions.

Let us customize together the NetWorks products to your needs.

Common Application Functions

NETWORKS provides you with a comfortable interactive graphic–tabular user interface. Several graphic windows can be open simultaneously, individually arranged, and these can even be for different network variants. The windows include a comprehensive set of navigation, display, editing, layout, export and printing functions.

You can display the network in Graphic Views in a geographical manner with optional background information. The backgrounds can be derived from various GIS sources using the import and export filters, and polylines and polygons can be processed conveniently.

Schematic Views allows a free design approach – were you benefit from the automated update of schemes in cases where the network topology or related data is changed.

The layouts of the Graphic and Schematic Views with their defined viewports, attributes (symbol sizes, colors, fonts, etc.), legends and links can be saved along with the network documents and can also be spread over different documents.

Table Views are related to individual object groups with a common set of columns. They offer: filtering, formatting, editing, import and export functions. It is easy to find selected objects in the graphics and vice versa. Any changes to the tables will appear automatically in the graphics.

Object Viewers allow access to special data elements in the Table Views. Here, a deeper view is supported to details about routing, allocation, interfaces, differentiated loads and capacities, queuing parameters and traffic contracts.

The viewer contents can be displayed as trees of objects, lists, graphical illustrations or tables.
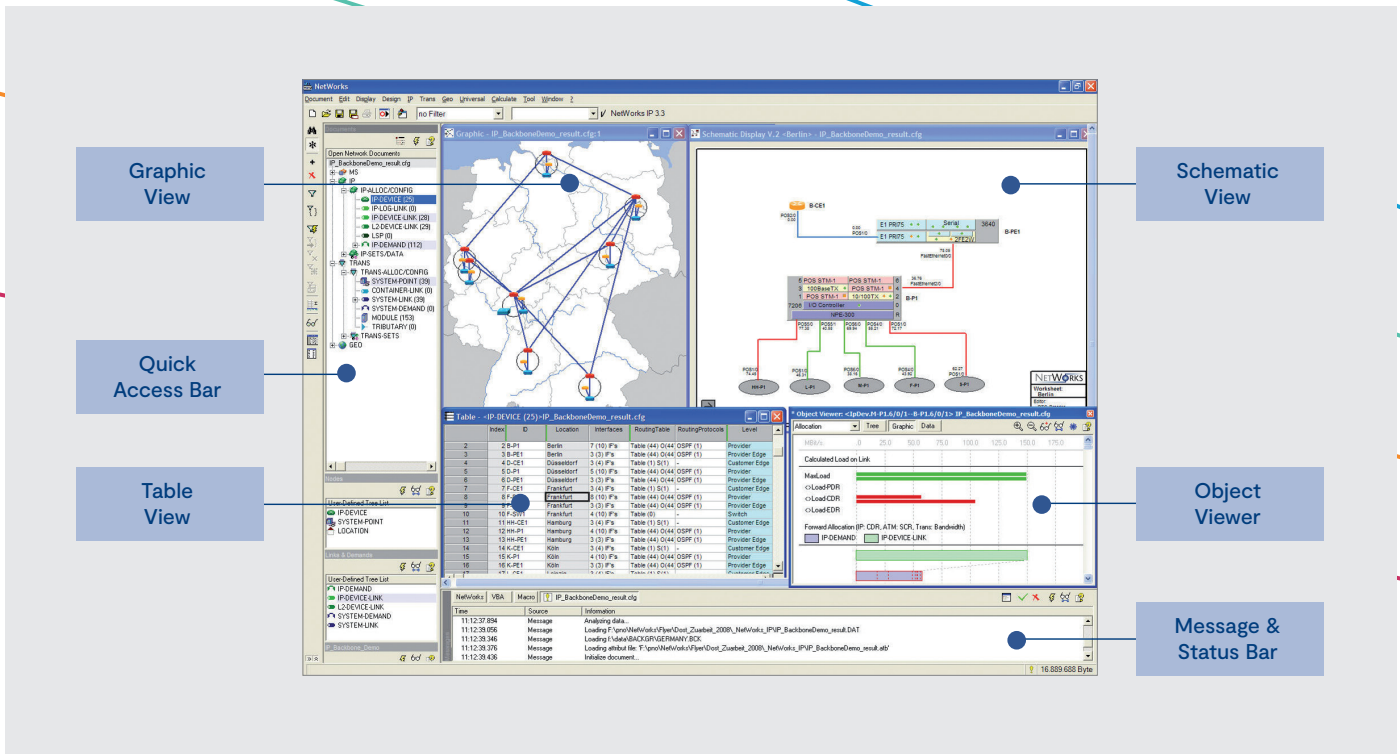
System Integration

The modular architecture of NETWORKS is the basis for various product configurations with common interfaces. Data can be imported and exported via the Windows clipboard or via standard database interfaces. It is possible to extend these functions (customer–specific import and export filters) on request. Optionally, users can implement efficient customized import and export filters using Visual Basic for Applications (VBA).

Import Facilities

> Windows clipboard (for data in spreadsheets)

> Standard database interfaces using Microsoft ODBC

> Intermediate database interfaces with table struc–tures defined in accordance to the standard data models of NETWORKS products

> GIS data to the NETWORKS background (Google maps, MapInfo, ESRI, AutoCAD)

> Periodically collected data from devices or manage–ment systems via scripts, e.g. SNMP
> - Configuration files
> - Entity MIB for device assembly
> - Routing tables
> - Interfaces

Export Facilities

> Windows clipboard (tabular data, graphical images)

> Plots, printouts and export files (bmp, jpg, emf) of networks graphics and schemes

> GIS export files of network topology

> Reports of tabular data and more complex struc–tured data (routes, interfaces etc.) as ASCII, html, xml

> Standard and intermediate database interfaces as defined for the import

Calculation and optimization functions can be modified according to the needs of the planning process by user–defined macros. They are built of sequential algorithm settings which represent individual planning steps. It is possible to execute macros stepwise in order to analyze intermediate results, or to run them completely in daily planning work. The under–lying data model can be easily adapted by the customer. The Planning Database provides multi–user access.

Customization and Support
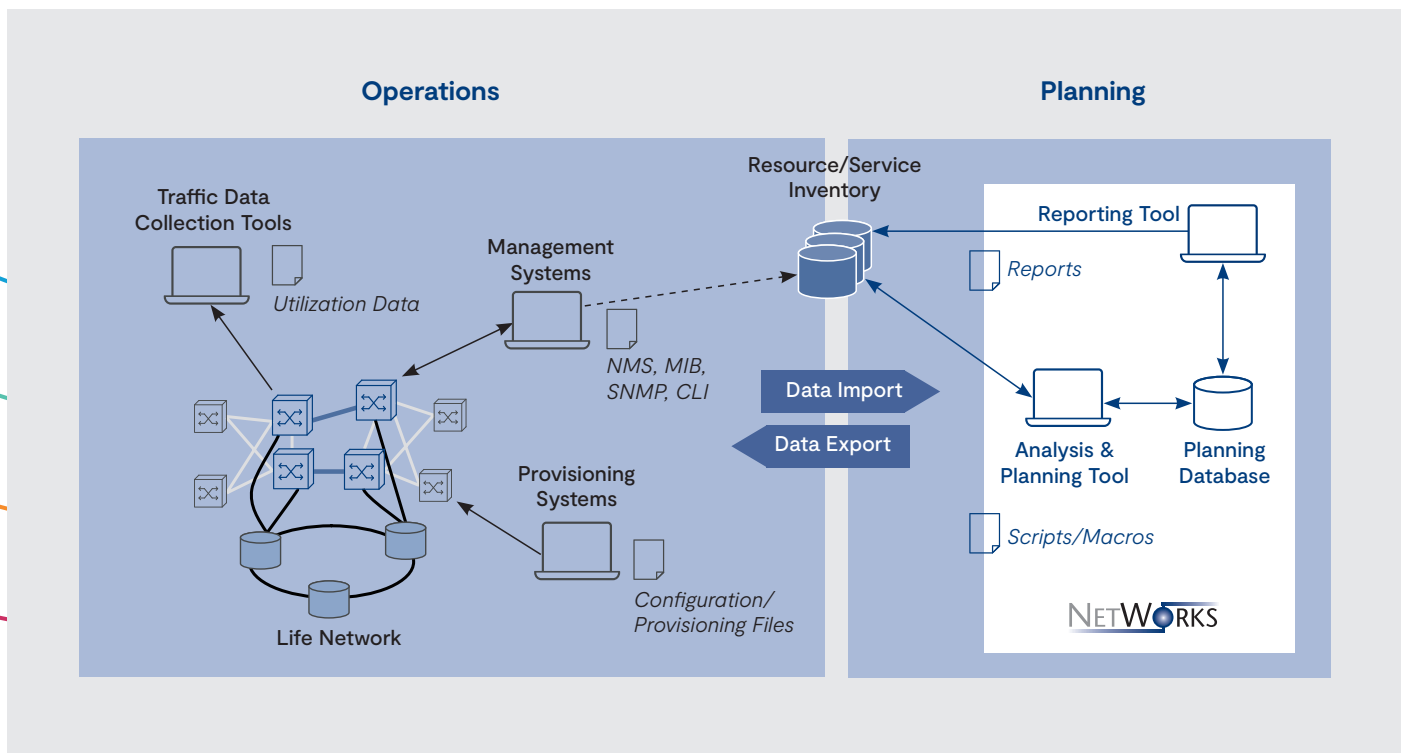
Customization of NetWorks products includes

> Coaching during the introduction of NetWorks with 'real' data

> Extension of standard data models of NetWorks products by customer-specific data elements

> Pre-setup of algorithms and compilation of macros matching the individual planning task

> Provision of customized import/export interfaces in NetWorks, e.g. to network databases of individual formats

> Programming of modules for NetWorks products in line with customer's specifications

Support – we deliver with NetWorks

> Detailed printed user manuals

> Online help for user functions most frequently required

> Customer's hotline (telephone, e-mail) in case of trouble

> Several days user training courses in English and German

> Service & maintenance according to individual agreement

NetWorks runs on standard PCs

> 1 GHz recommended
> Operating system Windows 10 / 11
> 4 GB RAM recommended
> 500 MB free memory on hard disk
> 24" monitor with a resolution of at least 1280 x 1024 pixels
> Parallel or USB interface for the dongle

A network installation with a common license management for several users is available.

We invite you to benefit from the advantages of analysis, planning and optimization with NetWorks.

We look forward to your inquiry.

NetWorks

a product of DETECON

Detecon International GmbH
Network Optimization & Tools
Riesaer Straße 7
01129 Dresden · Germany

Phone: +49 351 64890 111
Networks.Info@detecon.com
www.NetWorks.detecon.com

© 2023