

NETWORKS

A black and white photograph of four hands reaching upwards from the bottom, holding several thin orange strings that crisscross to form a network. The background is a bright, cloudy sky. The word 'NETWORKS' is overlaid in the top left corner, with the 'O' replaced by a blue sphere with a white highlight.

In a nutshell

NetWorks

Customized solutions for network operators and system manufacturers for analyzing, planning, and optimizing telecommunication networks and services.

Detecon provides to clients tailored software solutions for planning telecommunication networks.



100+ clients

25+ years expertise



Consulting: computer-aided analysis, planning, and optimization of telecommunications networks and services



Product development: customized software solutions for analysis, planning, optimization, and documentation



System integration: for Detecon's software products and client's network databases



Complementary services: training, coaching, maintenance, support

NETWORKS

NG
Transport

Fixed
Access

Technical
Cost Modelling

Mobile
Forecast

Our clients' biggest challenge is to have a clear documentation of their services and resources for analysing, planning and optimizing the network.

Analysis

Analyzing means to present a huge amount of detailed data in a human readable format, in regard of network resources and provided services.

Planning

Planning is a careful "off-line" process to prepare the intended changes in a network or a service portfolio towards the defined objectives.

That way, we can understand what is going on in the network.

That way, we can keep the mistake in reasonable range.

That way, we can reduce the risk for investments.

Optimization wants to select the best variant, with regard to some criterion under given constraints, from some set of available alternatives.

Optimization

Documentation is a process - and its result - of detailed collection of all relevant data of network resources and provided services into a database or drawings.

Documentation

With NetWorks Detecon provides a software suite that gives essential input to network development as well as to business decisions.

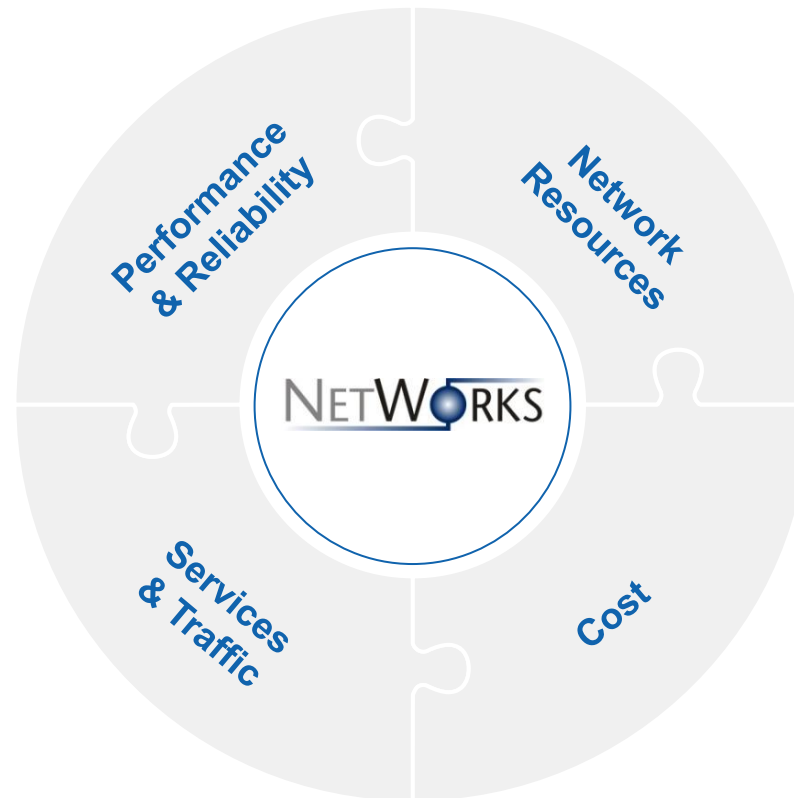
In focus: Performance – Reliability – Cost

Analysis & Calculation

- Capacity bottlenecks
- Single points of failure
- Optimized recovery
- End-to-end delays and availabilities

Analysis & Forecast

- Subscribers
- Source traffic
- Traffic split
- Traffic distribution



Analysis & Planning

- Bandwidth demands
- Optimized routing
- Loads and capacities
- Resource allocation
- Device configuration

Modeling & Calculation

- CAPEX and OPEX for network resources
- Production cost for services
- Inputs for business cases and business plans

The NetWorks product family includes comprehensive products for planning multi-layer networks as well as applications for specific use cases.

Comprehensive Products



NetWorks NG Transport

Analyze, Plan and Optimize Next-Generation Transport Networks with IP/MPLS, Ethernet and WDM/TDM technologies on copper, fiber-optic and wireless media mainly focused on active network components.

NetWorks Fixed Access

Analyze, Plan and Optimize Fixed Access Networks with FTTx, HFC, PON and Ethernet technologies on fiber-optic and copper media mainly focused on passive network components.

Dedicated Products

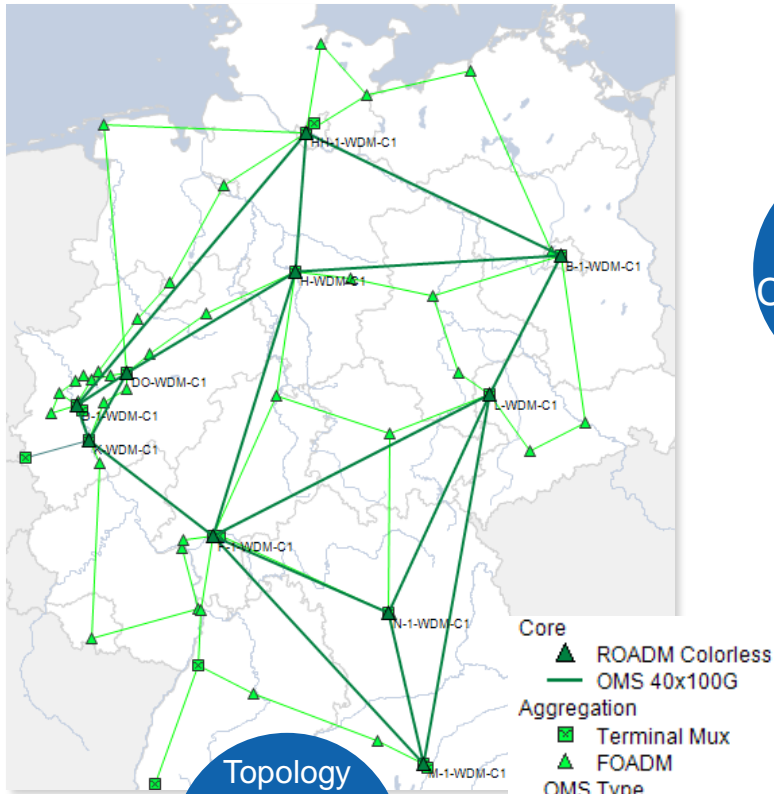
NetWorks Technical Cost Modeling

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

NetWorks Mobile Forecast

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

NetWorks NG Transport offers a professional transmission network design environment from strategic planning towards detailed design.



Topology of Core and Aggregation DWDM Network

Core

- ▲ ROADM Colorless
- OMS 40x100G

Aggregation

- Terminal Mux
- ▲ FOADM

OMS Type

- 8 Ch CWDM
- 40 Ch DWDM
- 80 Ch DWDM

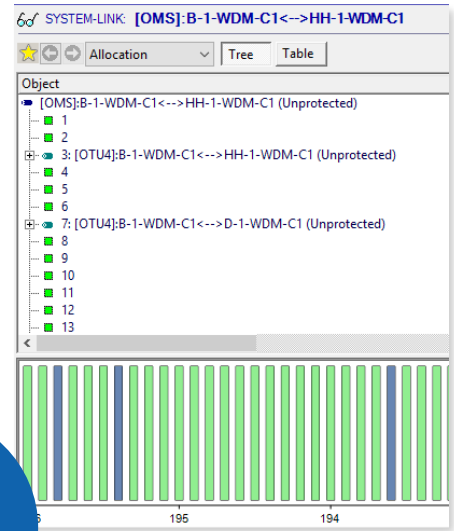
Equipment Configuration



DWDM Transmission Network

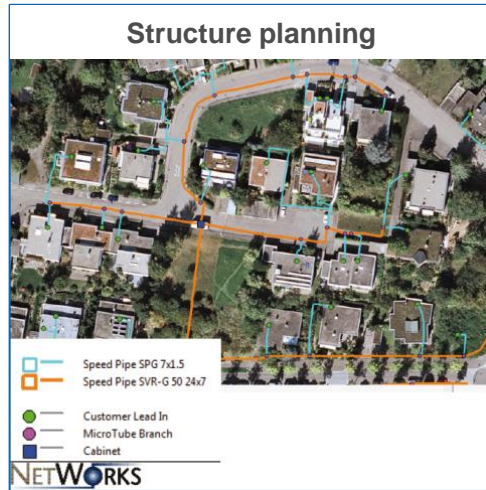
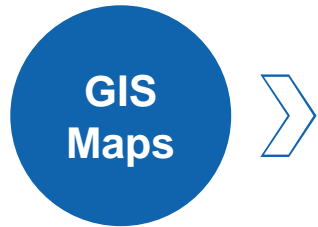
- Optical multiplex sections
- Optical transport sections optionally
- Assignment to system types
 - Number and grid of wavelengths
 - Bandwidth per wavelength
 - Supplier
- Optional modelling of individual wavelengths or OTN channels

System Allocation



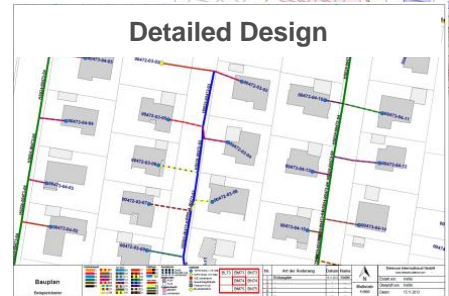
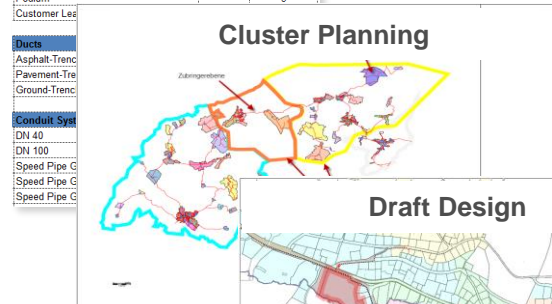
NetWorks Fixed Access offers a professional FTTx network design environment from rough cluster planning towards detailed design.

Planning of Duct & Conduit Network



Excel Reports

Bill of Quantity		
Project:	Design of Point-to-Point Network	
Exchange Area:	Code:	
	prepared:	
Description	Unit	Quantity
Duct Network Elements		
On Site		1
Podium		5
Customer Lead		



Features

- Direct import of survey data
- Common GIS and WMS interfaces
- Set of functions for fast and consistent network design
- Integrated check functions for high quality results
- Automated labeling
- Automated generation of comprehensive drawings including text positioning

Using NetWorks the productivity and quality of the planning work for transport networks can be increased.

Effects

Impact on transparency during the whole planning process

Multi-layer representation and analysis of network data

➔ **Detection of configuration and data errors**



Impact on planning effort

Acceleration of decision processes by automated planning

➔ **30% acceleration**








Impact on CAPEX and OPEX

Optimum network dimensioning and resource allocation

➔ **20% cost savings**



Clients from various industries benefit from our integrated license provisioning and consulting services.

Client	Description
	<p>Vodafone – NetWorks Mobile and NetWorks NG Transport Strategic Design of the Access and Aggregation Backhauling Network using Ethernet Microwave and WDM</p>
	<p>Orange – NetWorks NG Transport OTN and DWDM network analysis and strategic DWDM network design</p>
	<p>Deutsche Telekom – NetWorks NG Transport Analysis and Design of aggregation networks and of the IP core</p>
	<p>Stadtwerke München – NetWorks Fixed Access Network planning and documentation with integrated workflow system</p>
	<p>Globe – NetWorks Mobile Forecast, NetWorks TCM and NetWorks Fixed Access End-to-end mobile network capacity monitoring and traffic forecast for access, aggregation and core networks Technical cost modeling for LTE networks and fixed access network planning</p>

Thank you.



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