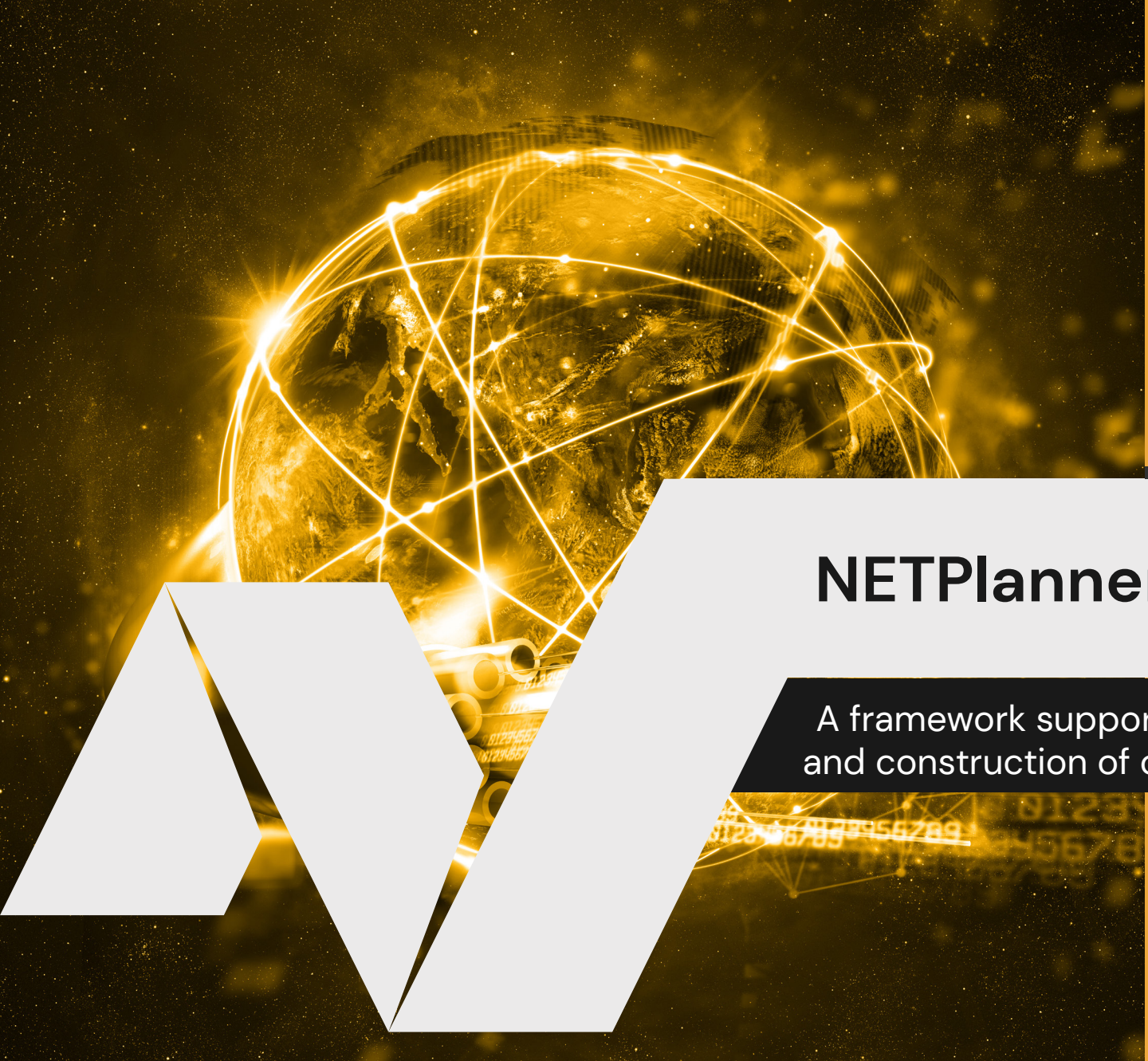


Netvisor

NETPlanners Portal

A framework supporting the design and construction of optical networks

A FRAMEWORK SUPPORTING THE DESIGN AND CONSTRUCTION OF OPTICAL NETWORKS

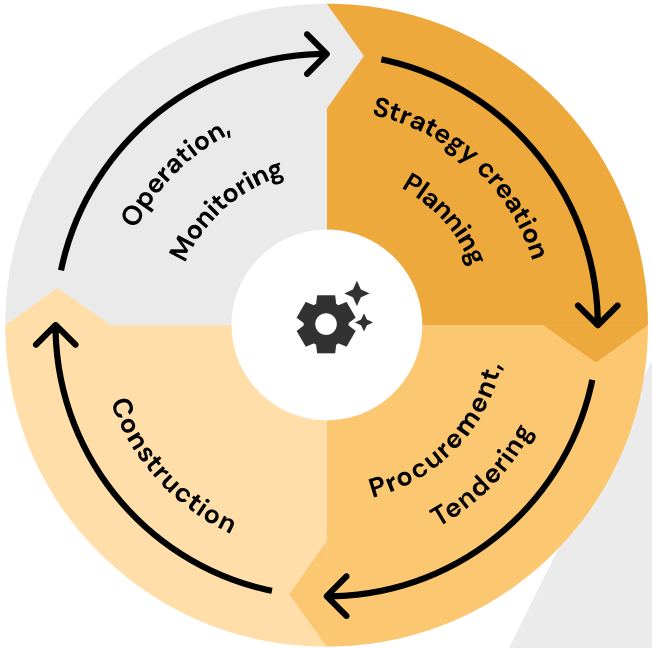
NETPlanners Portal

FOR TELECOMMUNICATION PROVIDERS AND INVESTORS

Due to the outstanding advantages of fiber-optic cable communication, almost all new telecommunications backbone networks are based on fiber-optic cables. For the high-level services provided by these networks to be available to everyone and to provide users with almost unlimited bandwidth, huge improvements in access and aggregation networks are necessary. The long-term solution is if the optical cable reaches end users and mobile base stations.

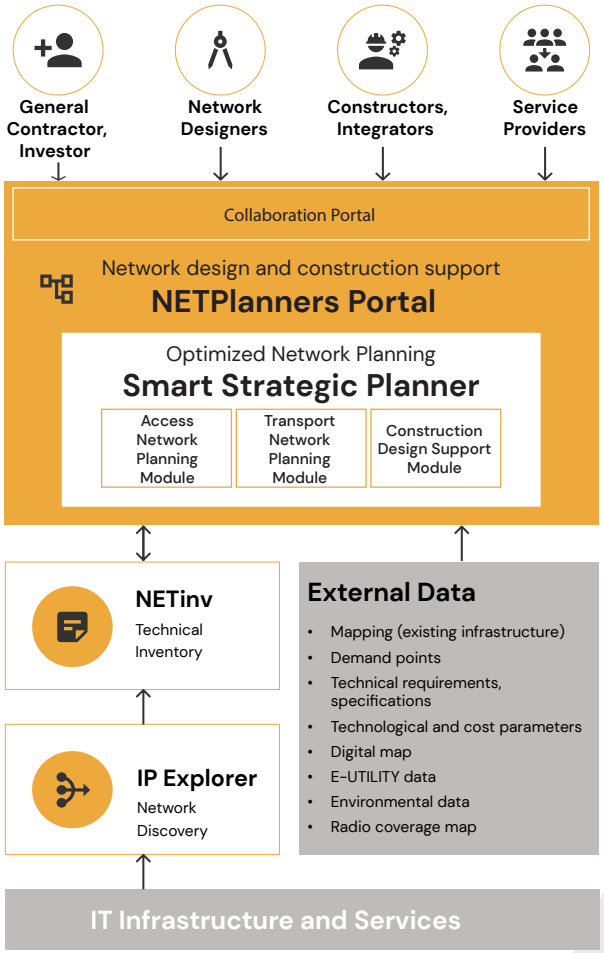
It supports the entire life cycle of network development projects

The construction of optical access and aggregation networks is a costly and time-consuming investment, so its business return - especially in sparsely populated rural areas - can only be ensured if several prerequisites are met. **Many business and technical decisions must be made during design preparation, detailed planning, and implementation.** Netvisor's **NETPlanners Portal product helps the main contractor investor, planners, and contractors in all phases of this complex work**. By using NETPlanners Portal, the direct use of network plans as inventory data can be ensured, thereby saving the costs of creating the inventory database and making available all the network management benefits from the application of the object-based geospatial inventory.



It also supports the main contractor, designers, contractors, and network operators

- Ensures the technical and commercial preparation of the optical network design.
- It supports the process of detailed permitting and construction planning with editing tools that are an integral part of the framework, with a set of tools that can be flexibly customized for display, automated control, data provision and data extraction.
- Supports the management of the construction project with scheduling and geospatial data, ensuring the collaboration of those involved in the implementation.



Benefits of using NETPlanners Portal

Cloud-based, simultaneous access for all project participants

During the planning of the optical network and the construction project, all stakeholders can simultaneously and easily access the data relevant to them via the web-based portal.

In addition to complex authorization management, the portal enables decision makers and planners to efficiently create, modify, and analyze version tracked network designs, as well as surveyed business and design information.

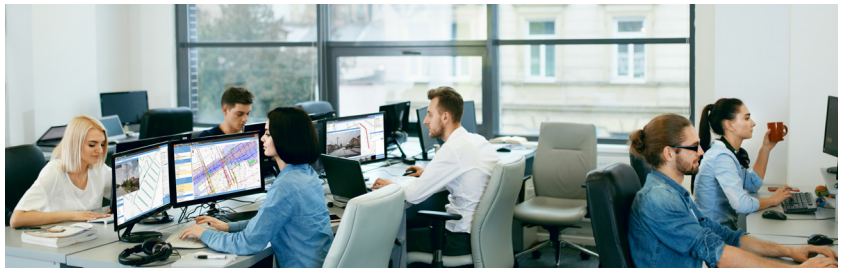
The status, progress and results of the planning and implementation can be easily followed even with any number of participants, and even nationwide network developments can be managed through a single central interface.

NETPlanners Portal is therefore a workbench based on a uniform GIS network model that can be customized to company processes, and it supports joint group work.

It facilitates the realization of the project on time

The project participants can communicate with each other easily, which helps the project to be completed on time. Late or non-scheduled performance can be quickly identified thanks to real-time tracking.

Thanks to the flexible design of the system, user roles, managed data and their interfaces, and supported processes can be customized effectively.

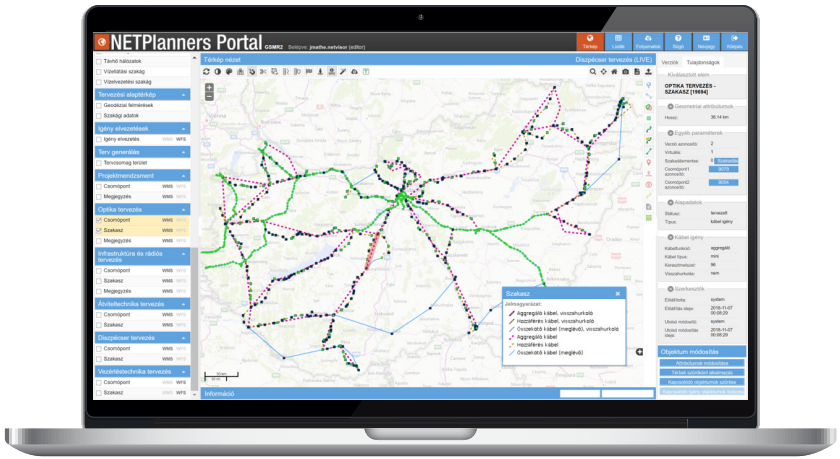


From the plans to the final documentation, the data is stored in a geospatial relational database containing the attributes of the objects, which allows querying, processing, and display from many aspects.

Geospatial foundations ensure complete interoperability with the geospatial inventory system(s) essential for modern operation and inventory.

Transparent planning and project monitoring

NETPlanners Portal is a thin-client central application that enables **commercial, survey, planning and implementation tasks to be carried out in a transparent manner** in telecommunications network development projects - regardless of the size of the project - through a single universal tool. During large-scale investments with many participants, the transparency of the processes, the activities of the actors, the data and information with geographical attributes, and the progress of the project is essential in terms of the success of the project and compliance with the planned schedule.

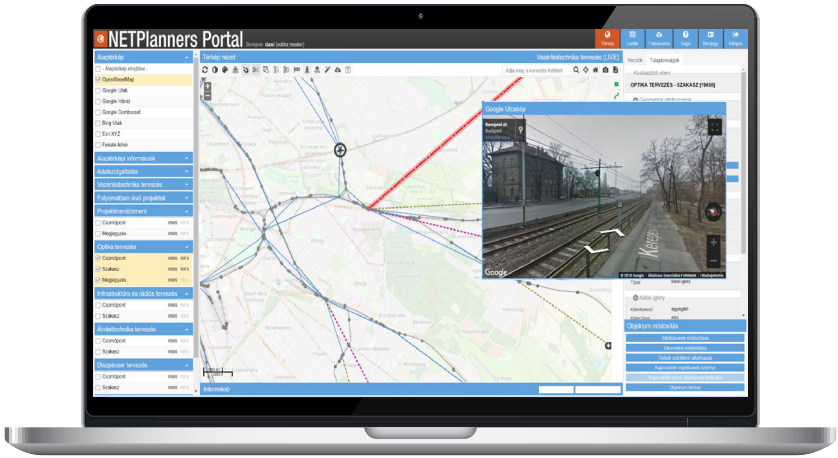


With its intuitive, clean user interface and spectacular visualization solutions, NETPlanners Portal provides benefits for all participants, which significantly increases the efficiency of individuals and the entire project and is a spectacular and interactive demonstration tool.

In addition to commercial and planning support, NETPlanners Portal also functions as a collaboration tool with the integration of JIRA, thereby realizing the traceability of project scheduling and progress, and its map display. Its clarity and visualization options also make it eminently usable as a demonstration tool for commercial and other purposes.

With its built-in topological rule system and route planning options, the tool can be used with great efficiency for strategic planning along routes - public roads, railways, private roads.

Data integrity, flexible editability, transportability to other systems



To support permitting and construction planning, NETPlanners Portal **ensures interoperability between CAD and other GIS systems for designers**. We ensure that the attributes assigned to objects are specified in a user-friendly way - with a drop-down element set - in accordance with the rules of form and content of the uniform communications object model and can be supplemented with specific data of the contractor and service provider as desired, thereby **guaranteeing the uniformity of the plans**. We can make planning work more efficient with network sizing algorithms that support the solution of planning tasks and database-based definition of network characteristics.

The data structure implemented in the NETPlanners Portal provides complete transparency in the system with the various data ranges and their links to each other. The work performed on the portal thus guarantees the integrity of previously recorded data. Part of the commercial/sales support is the realization of the commercial demand - optical fiber, bandwidth - relationships, with the help of which the routes and the demands appearing on the route can be managed separately according to users, **ensuring flexibility, both in terms of the post-editability of the routes and the modifiability and expansion of the demand list.**

Main portal services and planning results

The following important planning results can be automatically generated in connection with the networks designed on the portal, which greatly increase the efficiency and quality of the design. Portal services support the cooperation of all relevant actors and increase the return on network infrastructure investments.

HLD AND LLD SYSTEM DESIGNS

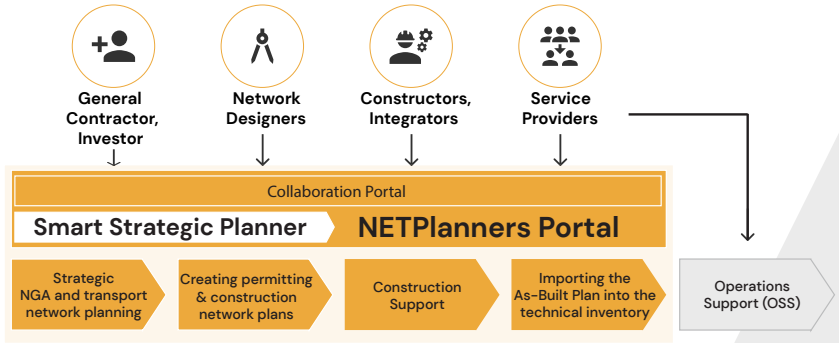
- Equipment and device list
- Routing of transmission channels
- Determination of CAPEX, OPEX
- List of marker geodetic reference points
- Optical fiber connection plan
- Network availability calculation (DTR)
- Optical fiber attenuation calculation
- Network vulnerability and utilization calculation
- Distribution frame layout plan
- The list of properties affected by the network construction
- Manhole pipe image

PREPARATION OF CONSTRUCTION PERMIT OFFICIAL DOCUMENTS

SUPPORT FOR DESIGN COOPERATION

- among professional designers
- with the participating authorities
- with utility operators

FILLING THE TECHNICAL INVENTORY DATABASE WITH THE AS-BUILT NETWORK DATA



Functional characteristics

- Support for different roles with different privilege levels
- CAS-based single sign-on authentication
- Visualization customization (display, coloring, labeling, layer order, filters)
- Network planning that takes into account topological regularities
- Editability of network plans with version management
- Manual recording of new data and the possibility of bulk loading, as well as the ability to modify the data and geometry of existing objects.
- An arbitrarily expandable layer system that provides detailed commercial and design tasks (from both vector and raster sources)
- Applicability of known and possibly available base map files
- Support for object, address, and route search
- Support for attribute-based and spatial filters and queries
- Ability to collect and report topological connections, object links and other connections.
- Provision of data transformation options for interoperability with different systems
- Support for standard protocols to access different data sources.
- Integration with a collaboration system (JIRA) to monitor the project schedule supported by visualization on the NETPlanners Portal
- Interoperability with AutoCAD in order to standardize the design and make it more efficient
- NETPlanners Portal also supports NETvisor's **Smart Strategic Planner** (SSP) product in planning data preparation and planning results display and processing.

1 PREPARE YOUR NETWORK INFRASTRUCTURE INVESTMENTS

WITH STRATEGIC PLANNING AND MAKE OPTIMAL TECHNICAL AND ECONOMIC DECISIONS.

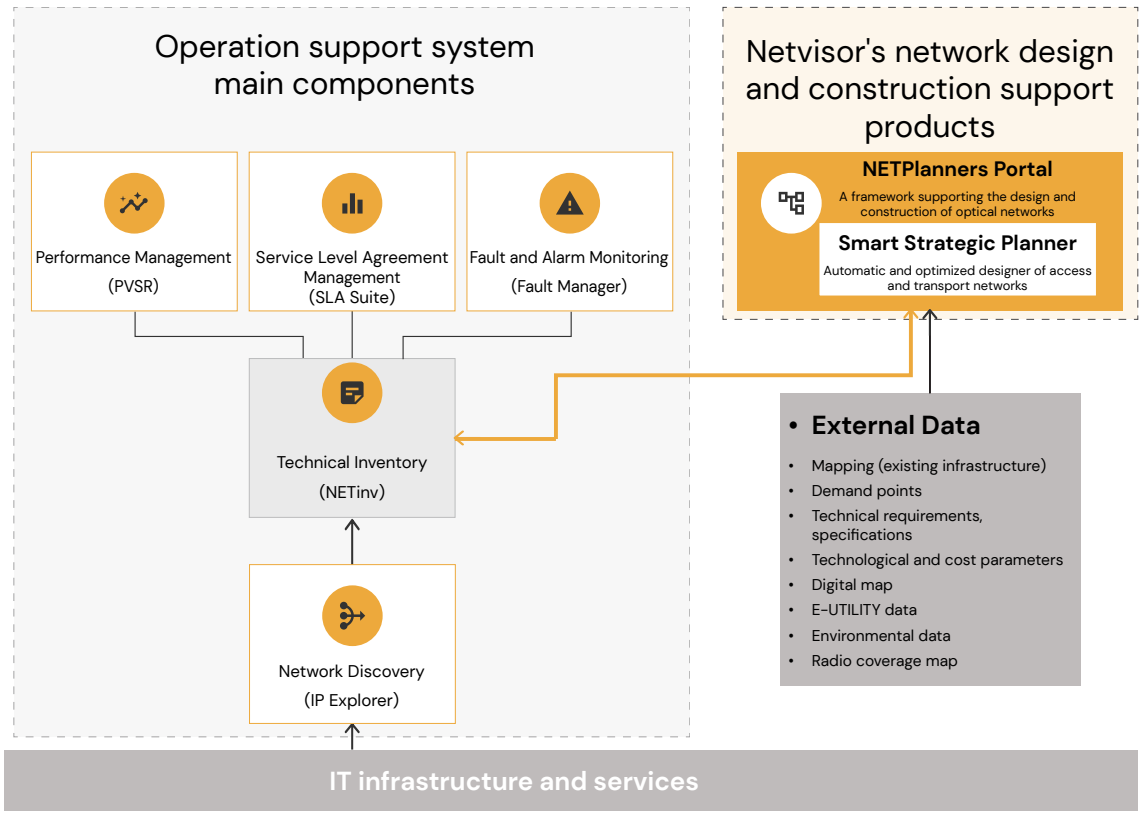
2 SUPPORT THE NETWORK CONSTRUCTION

BY QUICKLY PREPARING AUTHORIZATION AND IMPLEMENTATION PLANS AND FOLLOWING THE STATUS OF THE PROJECT, WHICH ALL PARTICIPANTS CAN ACCESS SIMULTANEOUSLY.

3 MAKE NETWORK OPERATIONS MORE EFFICIENT

BY USING NETWORK PLANS DIRECTLY AS INVENTORY DATA.

The connection between NETPlanners Portal and the operation support systems



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