

Network development and inventory

# Innovative inventory system

Enables rapid deployment of new services and technologies

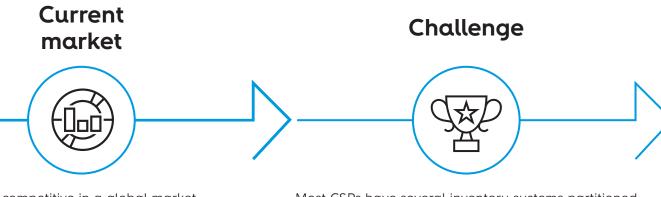




## Unified inventory system

To be competitive in a global market, CSPs need to rapidly deliver new services and technologies with operational efficiency. Having a multi-service and multi- -technology master inventory enables CSPs to achieve an end-to-end view with service-to-resource mapping, providing this information to the entire process chain.

It becomes essential a central inventory covering from the physical outside and inside plant, including infrastructures, cables, equipments and connectivity, through the network logical information, platforms, till the service, and the relationship between all these layers. An accurate view of inventory data is mandatory for the successful automation of Fulfillment and Assurance processes, thus helping to improve the efficiency of a large set of activities in CSPs operations.



To be competitive in a global market, CSPs need to rapidly deliver new services and technologies while maintaining operational efficiency. Most CSPs have several inventory systems partitioned by domains either technological or organizational, resulting in lost of operational efficiency and making service delivery a complex and costly task.

### **Business benefits**

• Master reference inventory for whole company

To support all B/OSS processes (fulfillment, assurance and others).

• Easy introduction of new services, network technologies and equipments

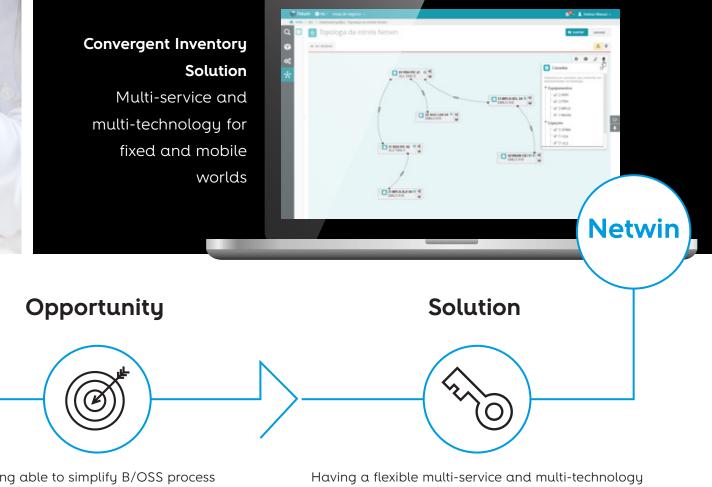
Catalog driven inventory using SID reference model.

- Enables accurate network design and inventory From planning through network design to inventory and ready for provisioning.
- Simplifies service fulfillment delivery Enables resource provisioning automation.
- E2E view of service composition

Easy navigation from service to resources.

• Simple integration with others B/OSS systems

Open APIs based on SOA approach makes simple the integration with other systems.



Being able to simplify B/OSS process automation, enabling rapid and efficient service delivery and maintenance. Having a flexible multi-service and multi-technology master inventory system with open APIs, supporting natively network development and resource provisioning functions.



### **Key differentiators**

- Pluggable Technology Packs;
- Unified Inventory Catalogue;
- Client/Network 360° Views;
- Full control of network development workflows;
- Management of Multi-technology and Multi-vendor Networks, and E2E Services;
- Easy and flexible configuration
- Netwin is part of TM Forum certified NOSSIS Suite.



Rapid service delivery Competitive advantage



Operational efficiency Increase revenue





Network Project Managers and Planners



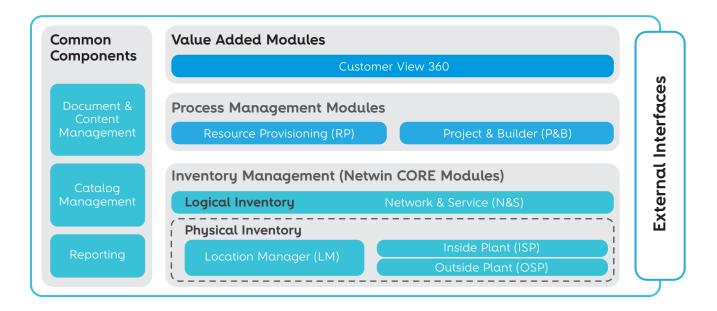
Engineering and Operational teams



Field Force teams for field Surveys and Network Construction

### The architecture

Netwin provides physical and logical inventory management modules as the core of the system. Physical inventory manage geographic hierarchy and physical places where equipments will be installed, as well as all physical resources (cables, splices, spliters, equipments) and physical connectivity (copper, coax and fiber) with georeferenced facilities. Additionally it manages room space and all physical elements of network equipment (racks, shelves, cards, ports, ..). Logical inventory manage logical network resources (TP, LC, SNC, Trails, Paths,..), network topologies and service inventory (CFS and RFS). On top of this, Netwin provides process oriented modules that enables network development and resources allocation.



### Main features



### Logical inventory of networks and services

 Management of multi-service, multi-technology and multi-vendor resources and catalogues.



### Reservation and resource allocation

- Supporting automated provisioning;
- Open APIs for B/OSS integration.



#### Physical inventory

- Infrastructures and network resources(indoor and outdoor);
- Georeferenced outdoor
  infrastructures;
- Graphical manipulation features / GIS support.



### Network design and development

- Physical and logical components;
- Resource allocation workflows.
- Surveys and project design supported over GIS maps.

### Use cases

Inventory Management Systems, like Netwin, are the basis for B/OSS process automation. Netwin enables CSPs to design their processes and use cases towards a full automation and efficient operations. They know how important is to have an open, reliable, scalable and low latency inventory system. Being ahead of traditional inventory systems, Netwin provides process oriented modules for network development and resource provisioning, and value added module for 360° customer and network view.



#### FTTx network development

CSPs are evolving their access networks, introducing new passive optical technologies (FTTx) to provide broadband TV services (TV, IPTV, VoD,..) at a competitive cost. This technology evolution put additional requirements on B/OSS, mainly on inventory systems. They have to support new planning and network design methodology, new equipment types, new physical connectivity and resource allocation rules.

Netwin provides the best solution, enabling the management of FTTx network development from an end-to-end point of view, from network planning to service provisioning. It also allows to control the end-to-end project delivery, to plan and design inside plant (OLTs, ODFs, ..) and outside plant network, starting from network survey, planning FTTx cells, design the physical network (cables, splices, splitters,..), validate end-to-end physical connectivity, produce documentation for network construction, update the inventory with the as built information and make FTTx network ready for service provisioning.



#### xPlay service delivery

Telecom market has evolved to offer convergent xPlay services on fixed and mobile networks. Today, some players are already offering 5Play with fixed (voice, internet and IPTV) and mobile (voice and internet) services. Netwin has a powerful resource provisioning module able to allocate resources to xPlay services and give end-to-end view of service composition, playing an important role to help CSPs delivering these services rapidly and efficiently. Providing open APIs, it simplifies the integration with CRM and OM systems to enable automatic service delivery.



#### 360° view of corporate services

Netwin customer centric views of inventory, gives a complete information of all services and resources allocated to a corporate customer, namely sites (service access points), service topologies and resources (physical and logical), allowing a simple drill-down navigation from customer, through service to resources and vice-versa.



### References

#### **Customers:**

 MEO (Portugal), Oi (Brazil), CVT (Cape Verde), TT (East-Timor), Unitel and TvCabo Angola (Angola), TvCabo Moçambique (Mozambique), MTC (Namibia), Medi telecom (Morocco), Altice USA (USA), Altice Dominicana (Dominican Republic) and HOT (Israel).

#### Motivation:

• Simplifying operations, enabling rapid and efficient service delivery.

#### **Application scenarios:**

- Engineering teams for planning;
- Operations teams for network deployment;
- Integration with B/OSS for service provisioning and assurance.

#### Added value:

- Innovative inventory integrates physical resources (outside and inside plant), logical network layer resources and service inventory;
- Covers the full process of network development, from planning to service provisioning;
- Support B/OSS fulfillment and assurance processes;
- Enables service delivery automation.



### **About Altice Labs**

Delivering key telecommunications technologies since 1950, Altice Labs has been shaping the future of technology, enabling Communications Service Providers and Enterprises to offer advanced and differentiated services to their customers and users.

> Altice Labs is an innovation and transformation catalyst supported on a strong and dynamic Innovation Ecosystem. Through technology, we are committed to improve people's lives and the way in which companies do business.

