The carrier's tale

A consolidated view of network inventory

How a leading multi-service carrier rapidly introduced a consolidated network inventory and asset management solution, delivering a single source of truth – reducing OPEX and boosting agility.

Case Study

CROSS
NETWORK INTELLIGENCE

The Challenge

The problems of success

One of the leading alternative providers of fiber connectivity, data centers and IT in the Nordic region has enjoyed consistent and rapid growth since it was founded in the late 1990s. Today, its reach extends to more than 16,000 km of fiber assets, across several countries. The company provides wholesale services to Tier 1 and other leading carriers, while also addressing direct customers. It offers a comprehensive service portfolio, spanning layers 1, 2 and 3, as well as internet, voice, data center and bespoke IT outsourcing solutions.

Rapid growth has brought success but has also generated a new set of challenges. Extending both the footprint and service portfolio meant that the network and operational infrastructure evolved to encompass numerous different platforms. Many services had been built individually for specific projects or engagements.

As a result, the company had to maintain many different data silos, each of which was documented but there was no over-arching, cross-platform view of the network, services and assets. For example, the operational team knew that they had equipment at particular locations, but they did not know which specific assets were deployed and where. Data was available, but it was incomplete and much was stored in simple spreadsheets. As a result, the data was essentially a static resource that could not be used operationally or to support the automation of business processes.

Recognizing the need for action

Recognizing this problem, the company sought to implement a solution that would collect data sources (inputs) from the different systems and assets in place, so that it could obtain a single source of truth regarding its network with a comprehensive overview of inventory. Such a view would enhance operational performance, boost agility and allow it to prepare for the next phase of growth.

The Challenge

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Initially, the company attempted to create its own, bespoke inventory and asset management solution. While this resulted in some prototype software, there were insufficient resources to complete and maintain the project. However, the exercise garnered important insights that helped the team to more accurately define requirements for an external solution and led to the development of a comprehensive RFP process.

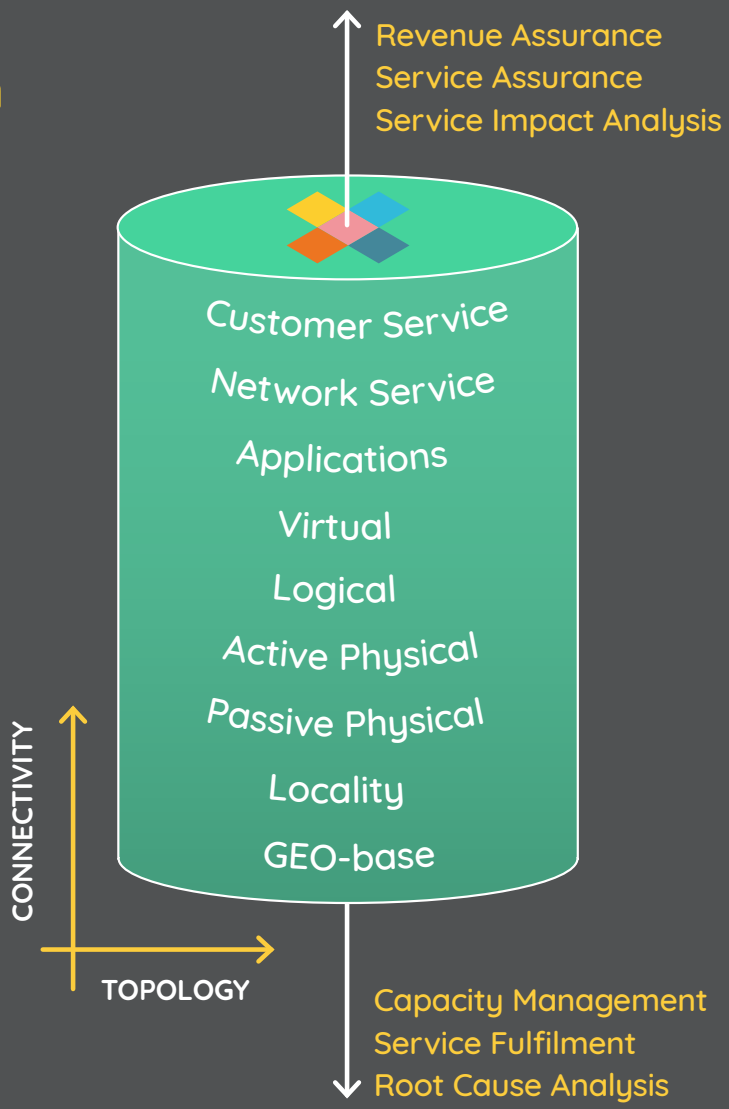
The resulting RFP emphasized the importance of implementing a company-wide asset management solution within one year – a challenging target. The preparatory work undertaken by the team had highlighted the gaps that existed between different platforms, so the ability to handle incomplete data was a critical requirement. In addition, recognizing the operational challenge and risk of introducing a new platform, the company needed a solution that could be introduced gradually, so that they didn't need to replace existing platforms from the outset but could ensure a graceful migration.

Choosing CROSS

After an extensive evaluation process, the team selected CROSS Network Intelligence (CNI) and its inventory solution CROSS. The CNI team had leveraged their long experience of OSS and network inventory challenges to develop a completely new approach to asset management. Their solution, CROSS, provides a complete, consolidated view of inventory, across logical, physical, virtual and service assets. It supports 'top-down' queries, allowing Root Cause Analysis, as well as a 'bottom-up' approach, enabling Service Impact Analysis, Revenue Assurance and Capacity Management, among other benefits.

CROSS also utilizes TMF-compliant APIs, allowing rapid integration into a standards-based environment. Probes are provided to collect the necessary import of data sources from the network management systems already deployed.

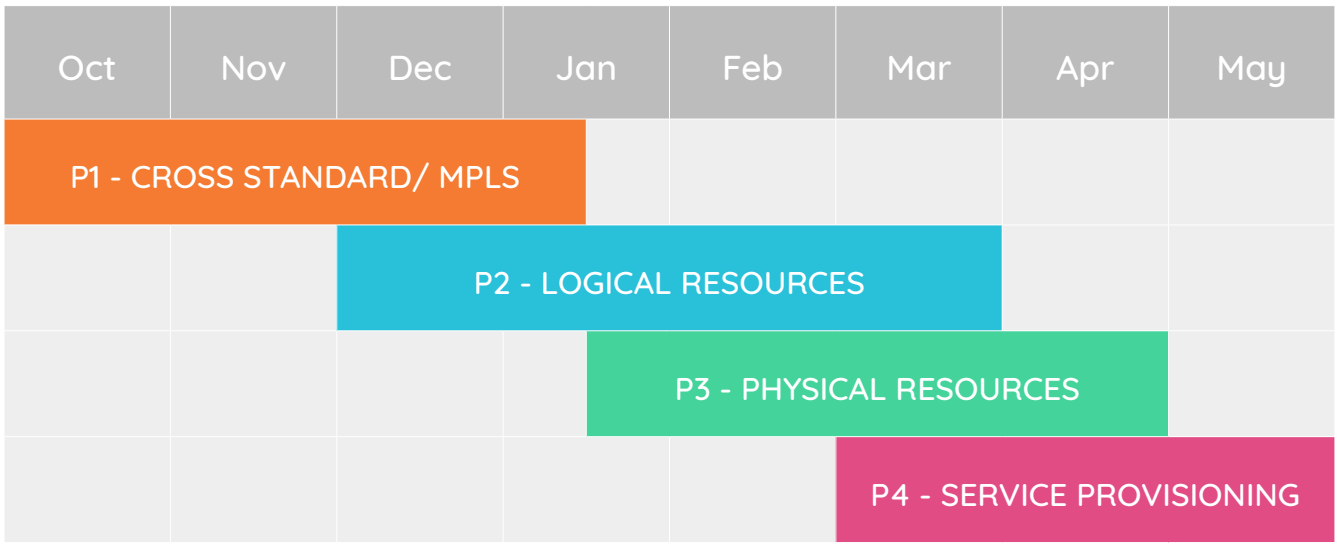
The CNI Approach



Implementation

The company had set some challenging targets for the implementation of the solution. The RFP had been initiated in May 2017 with a date for completion of May 2018 – but this also included the selection phase. CROSS was selected during the summer, with the commercial agreements being concluded in September – but there could be no change in the target completion dates.

This required deep commitments from all parties and led to close collaboration between the stakeholders. The project had been estimated to require 600 man-days, which needed to be fitted into an eight-month window, including the Christmas break. At the outset, the project teams agreed on a clear operating process and the allocation of responsibilities.

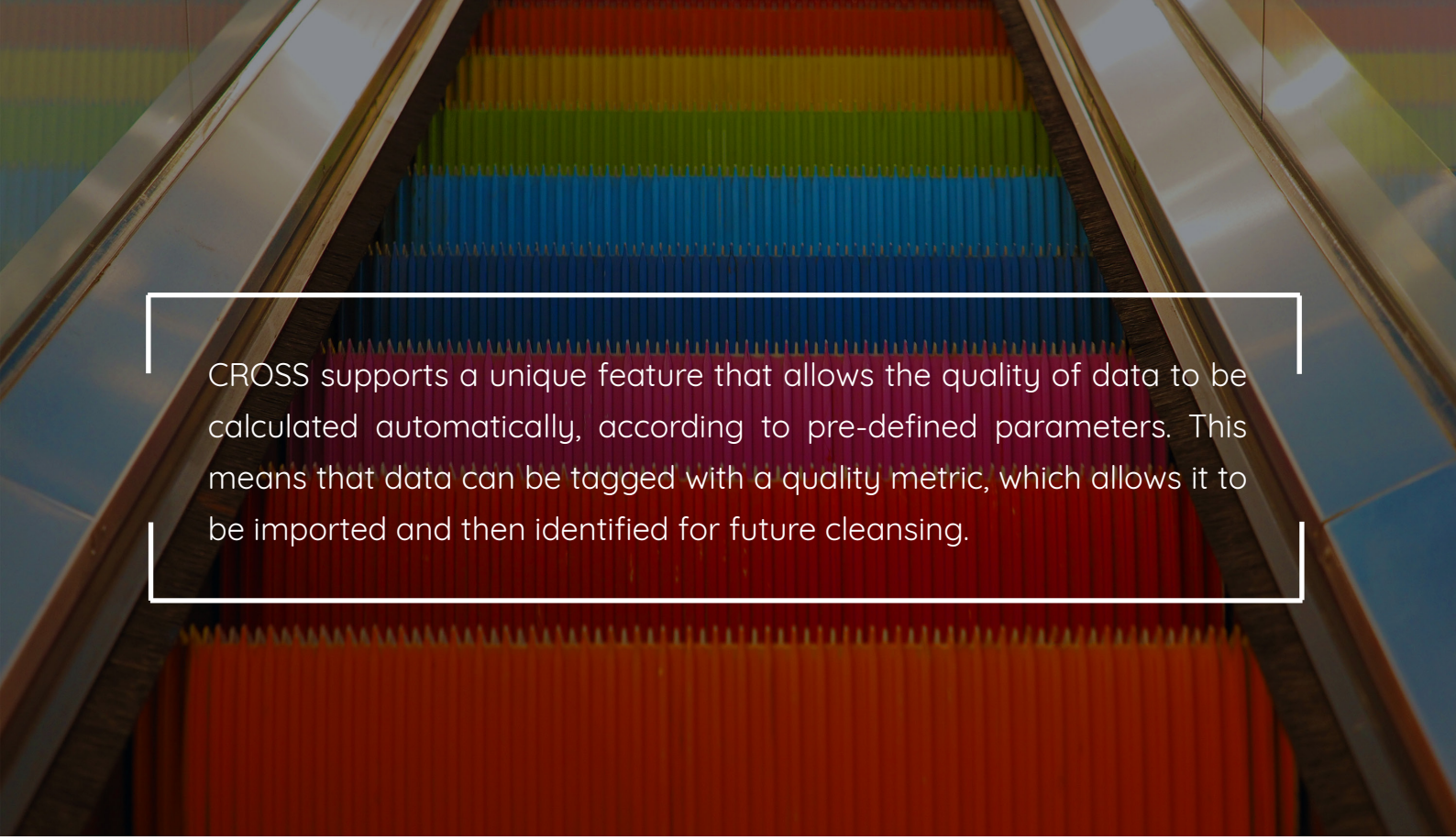


The project was divided into four distinct phases. First, the initial installation and configuration of the standard CROSS solution would be carried out. Second, an analysis of all logical data sources and how they would be made accessible to CROSS was undertaken. Next, the same procedure would be performed for the physical resources. Finally, service provisioning would be addressed, with a clear understanding of the different service technologies that needed to be supported.

To achieve these phases, the company nominated 'subject matter experts' or SMEs for each domain that had to be addressed. In parallel, CNI allocated a project manager and technical lead, backed by implementation staff, as well as a dedicated test engineer. Each SME was available on-demand to ensure rapid knowledge transfer, as well as approval for each stage of the process.

Responding to changing requirements

Although the project had been agreed, the company also had to ensure that it was aligned with evolving operational requirements. For example, shortly after the project had begun, it was decided, for strategic purposes, that MPLS service modeling needed to be brought forward from Phase Four and delivered in the first phase. This meant that the CNI team had to rapidly change their plans, resource allocation and scheduling, but this also provided an opportunity to demonstrate their responsiveness and flexibility.



CROSS supports a unique feature that allows the quality of data to be calculated automatically, according to pre-defined parameters. This means that data can be tagged with a quality metric, which allows it to be imported and then identified for future cleansing.

The flexibility of the CROSS solution was critical to this change of plans. It had been recognized that the data available from the many different sources was of highly variable quality.

The traditional approach to inventory is to cleanse the data before import, which creates significant overhead and potential delays. However, CROSS supports a unique feature that allows the quality of data to be calculated automatically, according to pre-defined parameters. This means that data can be tagged with a quality metric, which allows it to be imported and then identified for future cleansing.

This tagging ensured that the project timelines could be maintained, with resources allocated in the future for retrospective cleansing of data. It also meant that the company could model data according to their priorities. For example, legacy assets could be treated with a lighter touch than NGN assets, reflecting the importance to the business of different resources.

Despite this last-minute change, the project was completed on-time and on-budget, even with the addition of MPLS to the first phase. Each step was subject to full User Acceptance Testing (UAT) prior to being moved to the production environment, ensuring smooth handover to the operational teams.

Conclusion

The problems of success

CROSS was delivered to a challenging schedule, but the project was completed on-time and with the flexibility to accommodate shifting priorities. The solution offers the single source of truth that the company needed to grow its business.

The insights it delivers help the team to understand their inventory, accurately and with a comprehensive overview. The tagging feature allows continual refinement and improvement, while enabling the company to capitalize on the transition from the outset. CROSS also provides the required foundation for automation projects, helping the company to continue expanding its network and to support its continuing growth.

CROSS allows customization to meet new requirements and, thanks to the close collaboration during the implementation phases, the team has the expertise to implement many future changes autonomously. The solution has been live and in production since July 2018.

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