

# Analytics, AI and Automation Bring Significant Cost Savings to Telecommunication Networks

The single biggest opportunity for A<sup>3</sup> (analytics, AI and automation) to impact the bottom line of a telecommunications company is by deploying it within their network and related operational systems (OSS).

Today, most of the major announcements of successful deployment come from a handful of the largest global telcos. However, interest levels are high across all telcos.

## The Sophistication of A<sup>3</sup> Employed Today Varies

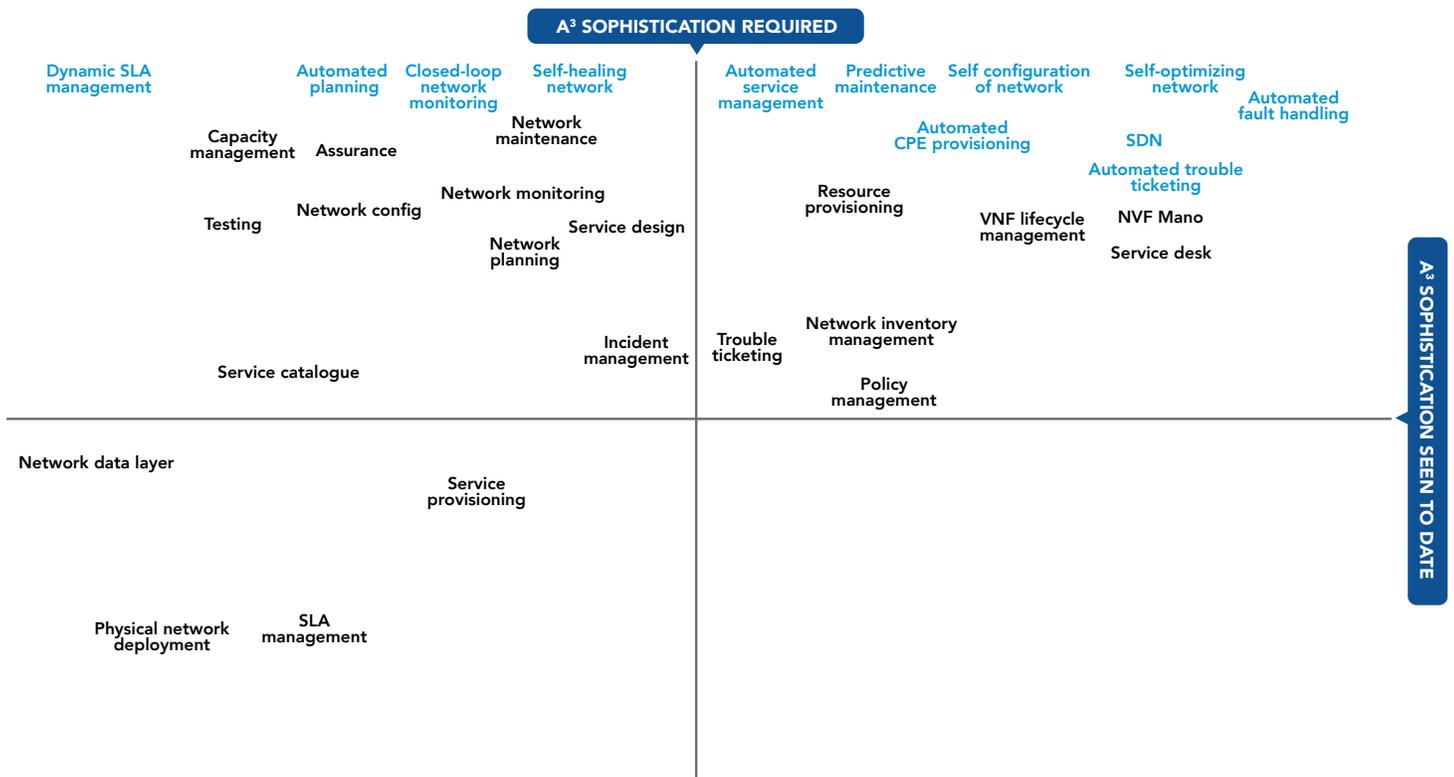
The A<sup>3</sup> solutions that can be deployed vary widely in “sophistication.” Simple analytics offer the ability to gain insight into how the network is performing - or machine learning (ML) and reasoning can be included within automations to create intelligent processes.

The diagram below shows the results of analysis into the:

- sophistication of A<sup>3</sup> required in various network and OSS functional areas (y-axis). Is there a place for ML-driven automation in the future or will simpler analytics be enough?
- sophistication seen to date (x-axis). Are the most far forward tier 1 telcos claiming to have deployed A<sup>3</sup> (or at least taken the first steps towards a full solution)?

The data points on the diagram are labeled to show:

- in **blue** text, the main overarching automation goals for the network environment which will bring the largest financial benefit to telcos. For example, a full self-healing network or automated service provisioning.
- in **black** text, other functional areas where A<sup>3</sup> brings benefit – for example, the planning of the network or in assurance activities which enable the network team to monitor customer experience.



## The Progress of Telco Deployments

**Levels of sophistication needed within A<sup>3</sup> deployments differ. Those further forward include:**

- early automations within larger teams doing repetitive activities. These are either small RPA-based improvements to parts of a process or a small number of more complete automations which stretch across a process. The most sophisticated examples are seen in the service provisioning process and on the network service desk.
- rules-based automation introduced as part of NFV.

More complex A<sup>3</sup> is needed to solve optimization and planning problems seen in functional areas such as network planning and service design. Currently, there are machine-learned predictions solving problems for individual domains or services. However, more complex optimization problems – for example, long-term, high-level network planning activities are likely to prove unsuitable for automation.

## Future Progress

Many of the sophisticated automations and long-term goals such as a self-healing network require orchestration capabilities from a multi-domain service orchestrator – so they are subject to the rollout schedules of SDN.

There are then a range of A<sup>3</sup> specific issues which await resolution, often at a telco-wide level. For example, additional work on broken processes and data.



## Introducing Vitria

**Vitria provides a next-generation AIOps platform to support telcos in this next phase of their network development.**

We focus on providing a light-weight, flexible solution that enables telcos to understand their customer's experience across domains through the increasing noise and complexity of new network builds. The solution identifies symptoms and the possible root cause of customer-impacting issues, which enables automation, self-healing and continuous transformation.

### With the VIA AIOps Platform:

- Baselines are generated on-demand for immediate visual representation of anomalies.
- Shared characteristics of any group of events can be analyzed to determine what the events have in common.
- At-a-glance insight gained into key performance indicators (KPIs) and process exceptions highlighted.
- Processes can be managed and visualized end-to-end in real time by correlating process data that resides in underlying applications, databases, and log files.
- Citizen developers are enabled with a low code environment using an extensible library of reusable drag and drop building blocks.
- Asset life can be extended with reliable predictive maintenance.

Implementing the VIA AIOps platform increases efficiency, lowers cost, and improves the customer experience through higher availability and better performing applications and infrastructure. At Vitria, we believe we can make self-healing a reality by bringing the power of artificial intelligence and machine learning to IT operations.