VISIMETRIX

NETWORK & SERVICE ANALYTICS

Towards the Next Generation Network Operation Centre (NOC)

Maintaining a healthy telecoms estate with a high availability of services requires constant monitoring. Service providers face the challenge of analysing vast volumes of data in real-time in order to **relate network performance to service impact and customer experience**. With multiple underlying diverse technologies and complex organisation structures, it can be difficult to achieve.

VisiMetrix was designed to address this problem. It is a domain specialised solution for **end-to-end monitoring of network health and service performance**, unifying data from disparate systems for the purposes of **KPI monitoring, early intervention, customer impact analysis and trending**.

As a user-oriented solution, VisiMetrix is optimised to **capture and enrich metrics and KPIs with context such as topology and SLA data**, and to present to users through **dashboards, wallboards and tailored visualisations** for their unique functions, from CxO to Care Agent.

Powerful thresholding and alerting features combined with excellent UX design ensure that

relevant information is presented clearly and in a timely manner, enabling real-time visibility of network data, service characteristics and quality measurements in multiple combinations across **multi-vendor network technologies**.

> "VisiMetrix provides Three Ireland with the intelligence to monitor and proactively respond to service related issues within the network, often before these issues can impact customers. Its powerful alerting, network visualisations and dynamic thresholding abilities can highlight inter-dependencies and hotspots quickly, clearly and directly to network operations teams."
>
> - John McGrane, Head of Access and Transmission Networks, Three Ireland

A key enabler within VisiMetrix is a **self-service feature that strikes the balance between flexibility and ease-of-use**. Removing complexity from the interface has been central to creating an accessible tool that drives user adoption across the business.
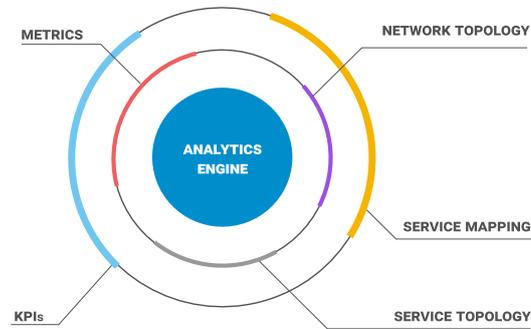
| ACTIVE DATA | MANAGEMENT LAYER | STORAGE, MODELLING AND ANALYTICS FRAMEWORK | VISUAL ANALYTICS |

MANAGEMENT LAYER
- CHANGE MANAGEMENT
- INCIDENT MANAGEMENT
- CONFIGURATION MANAGEMENT
- CUSTOMER SERVICE LEVELS & CONTRACTUAL AGREEMENTS

STORAGE, MODELLING AND ANALYTICS FRAMEWORK
- METRICS
- KPIs
- ANALYTICS ENGINE
- NETWORK TOPOLOGY
- SERVICE MAPPING
- SERVICE TOPOLOGY

VISUAL ANALYTICS
- DASHBOARDS
- AD HOC ANALYSIS
- MANAGEMENT REPORTING

A Graphic of VisiMetrix - Data is captured in near real time from probes, element managers, cells, links, routers and all manner of network devices. Context is added, such as topology or SLA data, and metrics and KPIs are presented to users through dashboards, wallboards and tailored visualisations, while intelligent thresholds and proactive notifications ensure early intervention to minimise customer impact.

> **"The overriding strategic impact of VisiMetrix has been to allow us to effectively share our network data by breaking traditional boundaries, making real-time and historic data easily accessible across the organisation for monitoring and analytics."**
>
> *- Declan Malone, Head of Mobile Data and Messaging, eir*

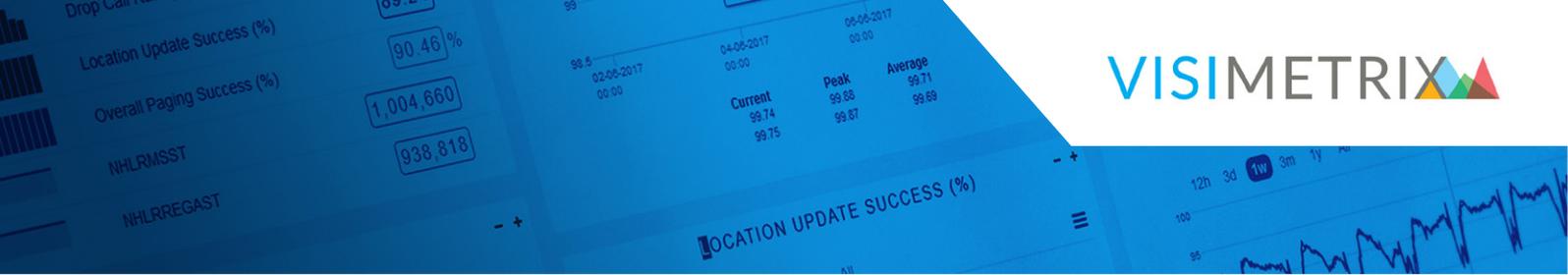## FEATURE SET

Ease of Integration

The ability to **collect and link data from multiple vendors** and diverse technologies is at the core of VisiMetrix, ranging from probes, element managers, cells, links, routers and all manner of network devices. The plug-in architecture also delivers out-of-the-box support for leading network nodes.

Contextual Data Presentation

The feature rich portal allows **easy creation of custom user dashboards**, balancing flexibility with ease of use and linking data across multiple services in a holistic fashion.

Examples of diverse views presented across the organisation include:

- **Wallboard Visualisations** tailor-made for large, mission critical Network Operations Centres
- **Executive Dashboards** that provide near real time priority information for all levels of management
- Detailed **granular views** for technical teams to enable system performance monitoring, analysis & troubleshooting
- **Service Monitoring dashboards** that provide a unique customer centric view of SLAs and service impacting performance changes

Data Science led Insights

VisiMetrix presents advanced KPI management features. It models your data to highlight trends, alert on statistical anomalies and **makes use of advanced analytics** to learn seasonal patterns and dynamically adapt thresholds to expected limits.

Discovery

VisiMetrix contains an **inbuilt IP based discovery** feature. It enables the auto-discovery of network nodes and links which can be dynamically presented within the relevant dashboard layers.

Efficient Webscale Architecture

VisiMetrix combines the latest internet and open source webscale technologies at a fraction of the cost of traditional OSS solutions - cloud deployed and DevOps enabled.

Intuitive Visualisations of Complex Data

VisiMetrix was designed for the user, striking the balance between data granularity and information-at-a-glance. **Users can create their own journeys** through the data, with highly personalised maps, schemas and other visual representations that bring data to life and drive adoption across the business.

DATA INTEGRATION MODULES

The VisiMetrix plug-in architecture combined with Sonalake agile services presents a highly efficient and cost effective framework for integration of a diverse range of network and service data components. Data is captured in near real time from probes, element managers, cells, links, routers and all manner of network devices.

Examples of integration modules deployed include:

■ Evolved Packet Core
Cisco (Adaptive Service Router)
APNs
MME
DNS

■ IP Core and backhaul
Nokia/ALU SAM 5620 Provider Edge Routers
Layer 2 and 3 (Interconnects, Roaming etc.)
Huawei U2000
Ceragon

■ BSS/Charging
Enhanced Charging Service (ECS)
PCRF
Prepaid Voucher Management
USSD
Middleware servers
Service Delivery platform (SDP)
Charging Control Nodes (CCN)
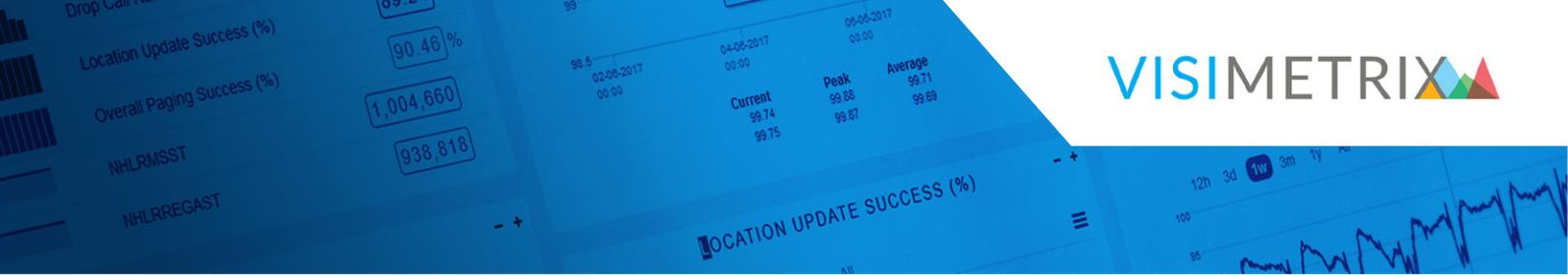
■ Fixed Line Services

■ Trouble Ticketing / Incident Management
BMC Remedy
HP Service Desk

■ WorkFlow Management

■ Circuit Switched Core
HSS
HLR
MGW
MSC
Mobile Voice Routes (Interconnect, RAN, BICC, SIP)
Equipment Identity Register
Sigtran/C7/SCCP
Roaming Signalling (Roamware)

VISIMETRIX

■ RAN Network
eNodeB
RNC
BSC
RBS

■ IMS
SES
DSC
MTAF
CSCF
Broadworks

■ Wifi Calling
IP Works
EPDG

■ Messaging
SMSC
IP SM Gateways

Towards the next generation NOC

Information overload is a consistent challenge for Network Operation Centres (NOC).

With a snowstorm of data and alerts from multiple systems, how can network health be best deciphered and communicated across the organisation? How can critical customer impacting problems be quickly identified and resolved, and how can the data be used to drive and prioritise investment decisions?

These are the types of questions that Sonalake has spent several years researching with network operators while designing the software to support the next generation of NOC. The result is VisiMetrix, a contemporary solution with a highly acclaimed user experience that encourages adoption across the organisation, leveraging valuable data assets previously consigned to vertical silos.

Ⓢ

Contact us to see how we can help you visualise your network performance.
sonalake.com