

P.I. Works provides centralized mobile network performance and capacity management solutions.

P.I. Works solutions assure lower costs for managing the network. They allow the existing network to be used more efficiently, minimizing capital costs for capacity expansion.

P.I. Works helps to improve the mobile subscriber experience.

## uSON PM

uSON PM enables end to end network performance monitoring and reporting.

### Domains in Scope

- Radio Network
- Core Network
- VAS Nodes
- IT Systems
- Transmission NW
- Fixed Network
- Wi-Fi Systems
- Small Cells & Femto

### Data Types

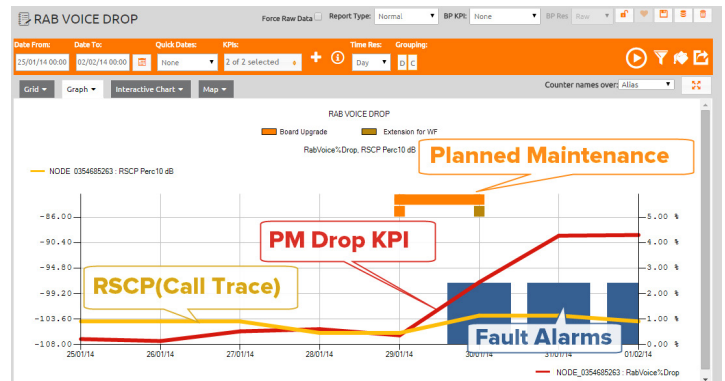
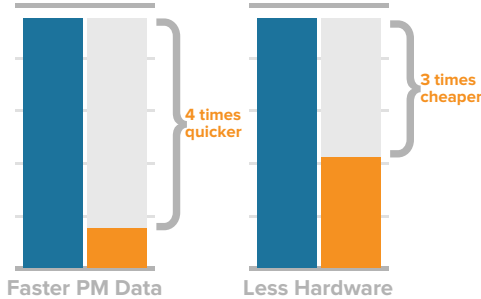
- Performance Logs
- Call-Trace
- Configuration Data
- FM Logs
- Ticketing System
- xDR Data
- Plan data
- External System

# uSON PM

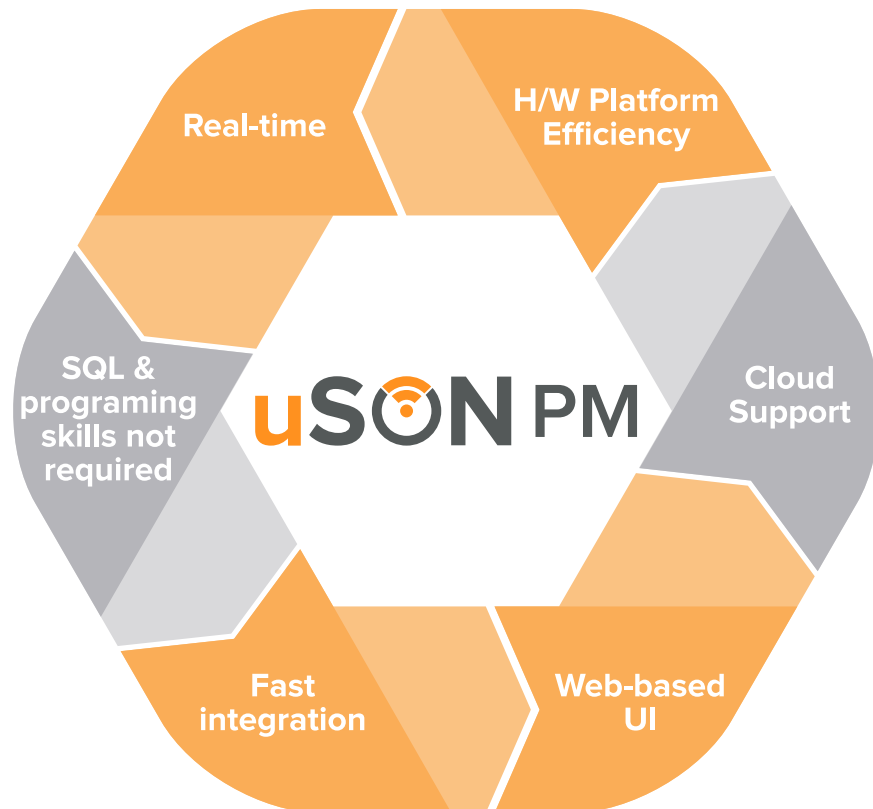
## Umbrella Performance Monitoring and Reporting

uSON PM is an umbrella performance management and reporting solution for Mobile Network Operators. Besides Radio, Core and Transmission network support custom sources like IN, VAS, Fixed Network Equipment, CEM and many others are also supported.

### P.I.WEB Benchmark results after swap Configuration: 115,000 cells in the network



Root cause analysis and network monitoring are made easier and simpler because of the enhanced reporting functions with high correlation capability from various data sources such as Performance Management, Configuration Management, Planning Data, Call Trace, Fault Alarms, Planned Maintenance Work etc.



- ▶ **Real-time reporting.** The data is visible within ~12 minutes after the data is generated at OSS.
- ▶ **Hardware Efficiency.** uSON ETL platform ensures resource efficiency while lowering H/W costs.
- ▶ **Cloud support.** The tool can be run in a public or private cloud-based secure infrastructure to enjoy the benefits of virtualized implementation like centralized maintenance and superior scalability and low TCO.
- ▶ **Fast integration.** Off-the-shelf parsers and flexible ETL pipeline provide faster integration of your mobile network including PM, CM, Trace, xCDR, Plan Data.
- ▶ **Flexible Web-based User Interface.** SQL and programming skills not required. User can customize reports by selecting any counter, parameter, configuration attributes. Rich graphic and grid options makes the worst cell analysis much easier and faster. State of the art reporting engine allows operator to measure user quality perception by end-to-end KQI calculation.
- ▶ **Built-in 2D/3D Map Interface.** GIS allows enhanced visualization of network elements as well as visualization serving distance of each 2G/3G/4G cells.

**OTHER PRODUCTS**

**● SON Solution**

uSON is a centralized automated network optimization solution. Adaptive learning algorithms are coordinated centrally to manage improvements to complex heterogeneous networks. uSON yields best subscriber experience, increased data throughput, while minimizing OpEx and improving utilization of network equipment leading to CapEx reductions by deferral.

**● RAN Troubleshooting**

uSON Inspection is an advanced, easy to use interface for in-depth examination of the access network with root-cause analysis functions. Mobility analysis, advanced GIS functions, timing advance visualization, CM vs PM correlation features, golden parameter audits features allow operator improve their engineering efficiency while minimizing drive-test costs and customer complaints.

**Contact Us**

**● Head Office**

Teknopark İstanbul Sanayi Mah. Teknopark Bulvarı No:1/3A 103 34906 Pendik İstanbul, Turkey  
Tel: + 90 216 999 1099

**● APAC**

100 Tras Street #16-01, 100AM, 079027 Singapore  
Tel: + 65 31 590 450

**● Europe**

Dimitrie Pompei Street, no 10A, Conect 1 Building, 5th floor, District 2, Bucharest, Romania  
Tel: + 40 31 828 0818

**● USA California**

5960 Stoneridge Dr., Suite #204 Pleasanton, CA 94588  
Tel: + 1 925 737 0503

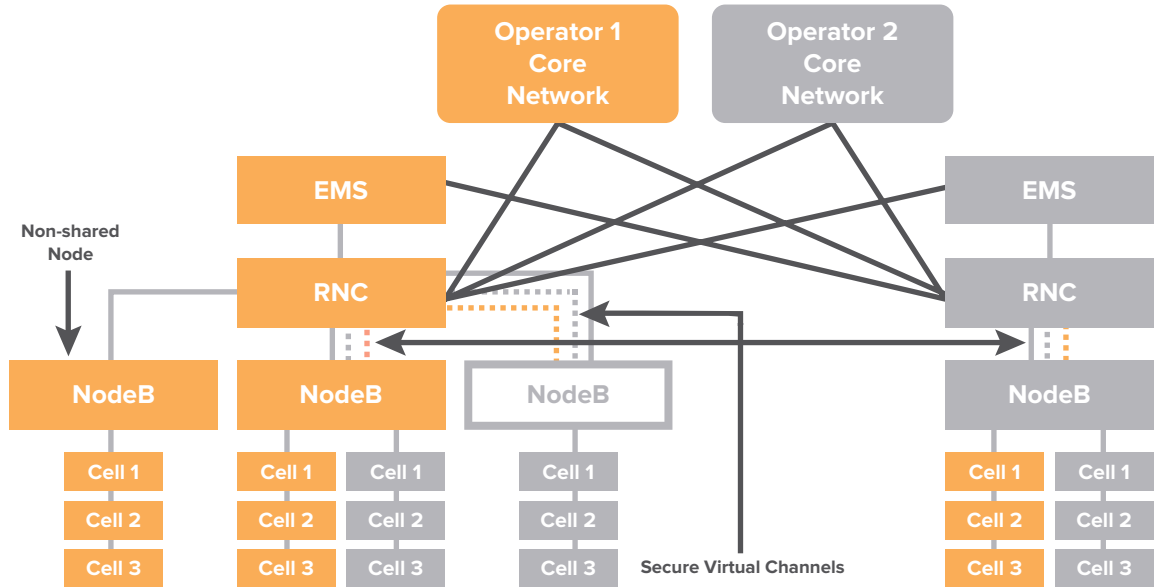
**● USA Virginia**

1760 Reston Parkway, Suite #506 Reston, VA 20190  
Tel: + 1 703 828 0067

[www.piworks.net](http://www.piworks.net)

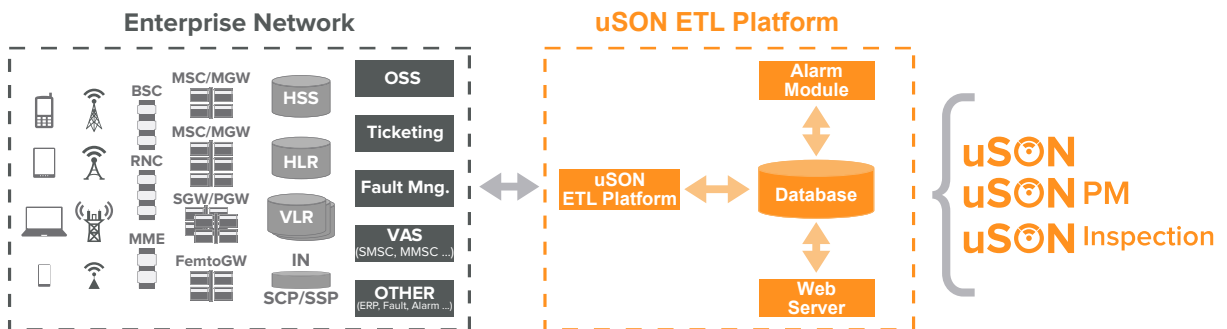
**KEY FEATURES**

- ▶ Shared network feature is a fully virtualized solution with shared data store, back-end ETL platform and services. Provides full data privacy between operators with accurate, segregation aware KPI evaluations.
- ▶ Fast integration with a large library of built-in technology packages for a wide range of vendors of RAN, core, and transmission equipment.
- ▶ Unified KPIs across vendors and technologies.
- ▶ KPI alarm module catches the real problems by advanced filtering and conditioning options, including thresholding and trend alarms.
- ▶ Multi technology support for GSM, UMTS, CDMA, WiMAX, LTE, TD-LTE, LTE- Advanced.
- ▶ Small cell ready.
- ▶ Umbrella FM Integration with Netcool, TeMIP, Maximo etc.
- ▶ Pay as You Go model provides short lead time to productivity, low TCO without long term investment.



**SINGLE SOLUTION FOR ALL YOUR NETWORK NEEDS**

There are 3 components to P.I. Works' uSON PM Architecture: uSON ETL Platform, DB server, and the web server. uSON ETL Platform collects data from all sources of statistics (RAN, Core, VAS, etc.), parses the data format (data parsing), processes them and loads to the database. P.I. Works tools use this database for all operations on network data.



- Performance Monitoring+**   **Open-loop Optimization+**   **Closed-loop Optimization+**
- Radio Network Planning+**   **Alarm Management+**   **Troubleshooting+**
- Call-Trace Analysis+**   **Fault Management+**