T² TRANSPARENT TECHNOLOGIES
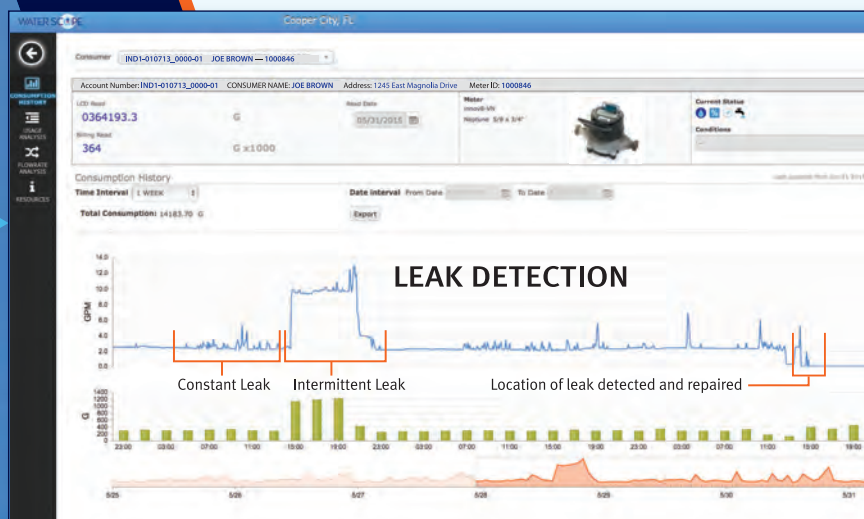## Advance Metering Analytics

VN Virtual Network

Transparent Technologies has teamed with the country's largest wireless network provider to offer the Virtual Network system for water utilities. The VN System communicates over the existing Verizon Wireless network which means no new infrastructure, no installations or maintenance hassles, and superior performance. The "virtual network" allows for immediate deployment of endpoints and utilization of high-resolution interval data.

LEAK DETECTION

Constant Leak   Intermittent Leak   Location of leak detected and repaired

The VN system requires **no new infrastructure** and provide 5-min data resolution.

Innov8-VN   Innov8-VNr

Universal Endpoints can be deployed on virtually any existing meter.

Machine-To-Machine

Hydrant / Construction Meter Application

Introducing the **Voyager 3" Hydrant Meter** with VN cellular-based registers. Existing hydrant meters may be retrofitted with the VN register depending on manufacturer. The meters will report in every day with readings and consumption history, even when you are not sure of where they are. Talk to your local Metron-Farnier/ Transparent Technologies representative to discuss your 3" new hydrant meter applications or to verify if a VN register is compatible with your existing hydrant meters.

Voyager™
HYDRANT METER

Irrigation / Watering-Event Monitoring System

Waterscope provides the most granular data for monitoring watering events of *any* AMI system. Continuous 5-minute sampling of consumption will monitor and alert for the following events EVERY day:

- Set the system for voluntary or mandatory restrictions
- Tracks the number of times the property waters per day and week
- Tracks the time of day the watering event occurs
- Utilizes the billing system interface to track odd and even address adherence to watering restrictions
- No longer will there be a need for time consuming and expensive "water cops"
- All consumption history will be accessible via the Utility portal for enforcement and Consumer portal so that property owners can verify adherence or be alerted when watering events violate current restrictions.
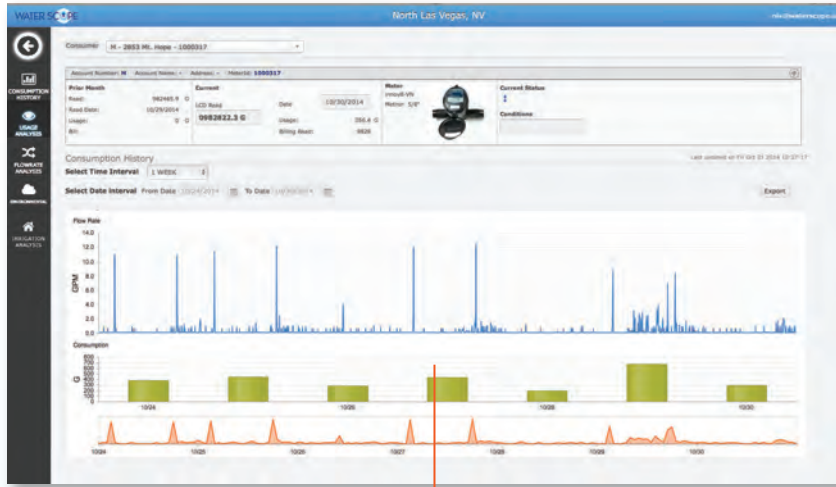
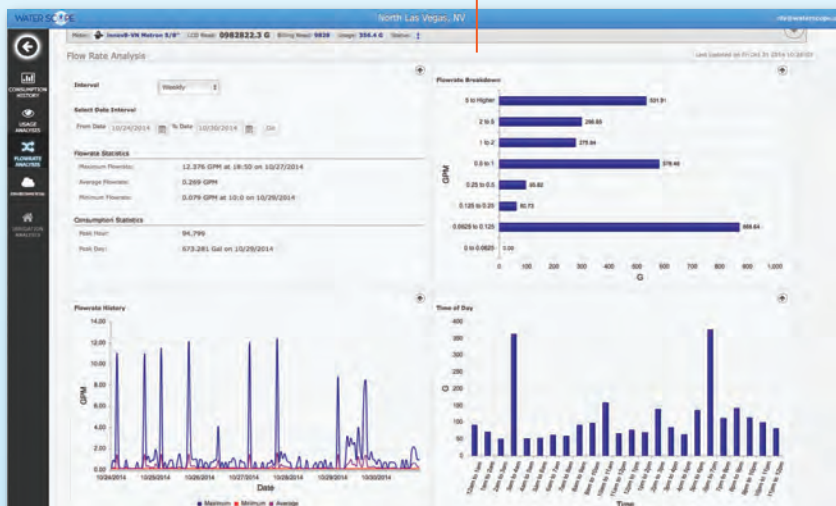# Utility and Consumer Access – Meter Analytics Website

Interactive Rate of Flow
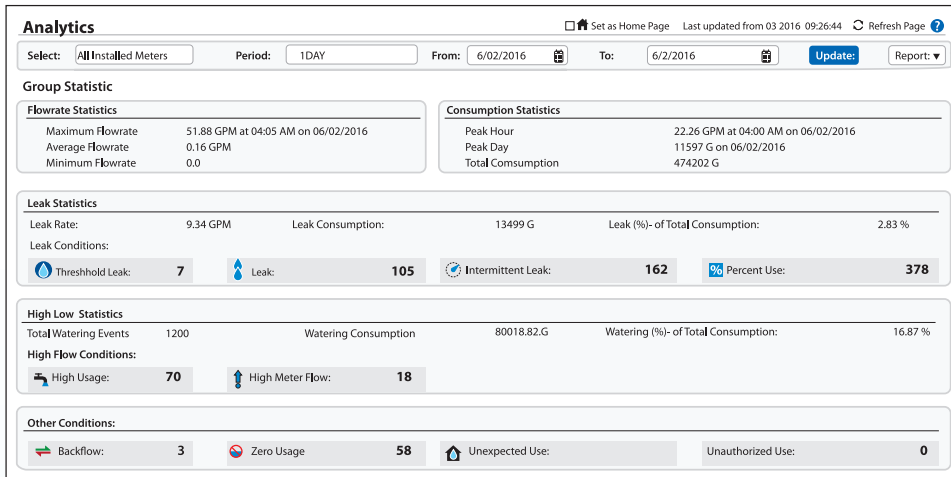

Identification of the Type of Water Consumption

Meter Sizing, Time of Use and Flow Rate Percentages

WATER SCOPE

Powered by:

verizon *wireless*

Virtual Network (VN) Features and Benefits

- **Completely Scalable Deployment:** Install 1 or entire system today ~ Read them tomorrow ~ No Infrastructure installation, ownership or maintenance ~ Free unlimited access to Water Scope website for daily reading, high-level analytics, billing and usage profiles ~ Strategic deployment accounts include:
  - **Commercial / Industrial / Large Users**
  - **Hard Access Customers**
  - **Military Bases**
  - **Chronic Complainers**
  - **Fill in holes in existing AMI Systems**
  - **Hydrant / Construction Meters**

- **Retrofits to most modern mechanical meter bodies** ~ No need to change meter

- Increase existing PD/Piston meter accuracy to beyond new meter specifications.

- **Connects directly to the Verizon Network:** *No* Propagation Studies, *No* Hardware, *No* Software, *No* Servers, *No* Support Costs, *No* Network Headaches

- Industry leading 5-minute continuous sampling and Sub 1/10th GPM resolution

- Highly-evolved Utility and End-User access via T2's Water Scope secure portal

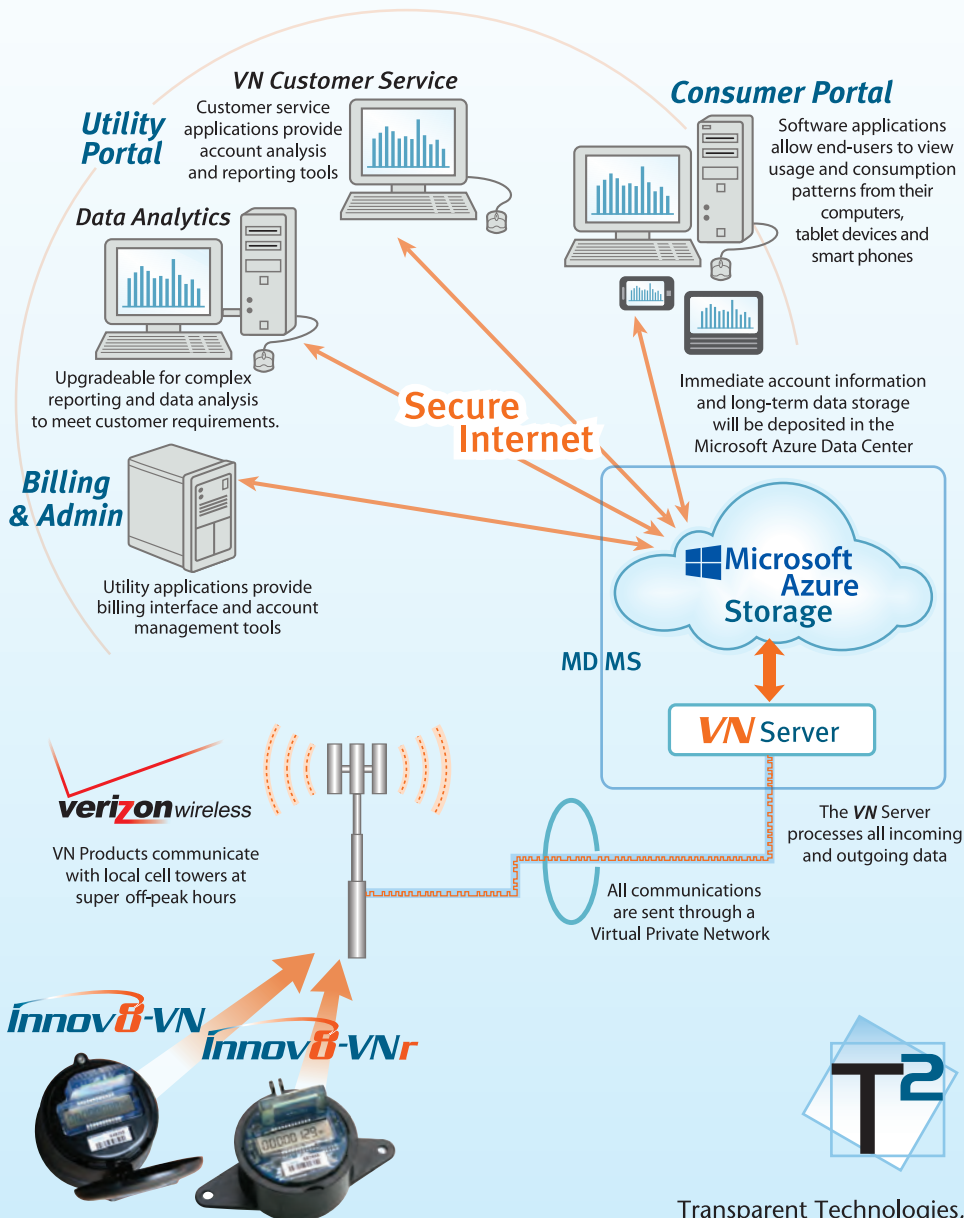- Secure cloud storage through the Microsoft Azure platform

System-Wide Daily Analytics

Analytics
☐ 🏠 Set as Home Page   Last updated from 03 2016 09:26:44   ↻ Refresh Page ❓

| Select: | All Installed Meters | Period: | 1DAY | From: | 6/02/2016 📅 | To: | 6/2/2016 📅 | Update: | Report: ▾ |

Group Statistic

Flowrate Statistics

Maximum Flowrate	51.88 GPM at 04:05 AM on 06/02/2016
Average Flowrate	0.16 GPM
Minimum Flowrate	0.0

Consumption Statistics

Peak Hour	22.26 GPM at 04:00 AM on 06/02/2016
Peak Day	11597 G on 06/02/2016
Total Comsumption	474202 G

Leak Statistics

| Leak Rate: | 9.34 GPM | Leak Consumption: | 13499 G | Leak (%)- of Total Consumption: | 2.83 % |

Leak Conditions:

| 💧 Threshhold Leak: | 7 | 💧 Leak: | 105 | ⏱ Intermittent Leak: | 162 | % Percent Use: | 378 |

High Low Statistics

| Total Watering Events | 1200 | Watering Consumption | 80018.82.G | Watering (%)- of Total Consumption: | 16.87 % |

High Flow Conditions:

| 🚿 High Usage: | 70 | ↕ High Meter Flow: | 18 |

Other Conditions:

| 🔁 Backflow: | 3 | 🚫 Zero Usage | 58 | 🏠 Unexpected Use: | | Unauthorized Use: | 0 |

- System Overview for Daily, Weekly, Monthly & Utility-Selectable Dates (customizable groups)
- Max/Min/Average flow rates with timestamp for the selected time interval
- Summary of System Leaks – rate of flow, number of leaks, number of threshold leaks and number of leaky toilets
- High-Flow Condition Synopsis
- Irrigation/Watering Event Conservation Adherence
- Number of Backflow, Zero Use, Unexpected and Unauthorized-Use Events

How the system works is simple and concise.

VN Customer Service
Customer service applications provide account analysis and reporting tools

Utility Portal

Data Analytics
Upgradeable for complex reporting and data analysis to meet customer requirements.

Billing & Admin
Utility applications provide billing interface and account management tools

Consumer Portal
Software applications allow end-users to view usage and consumption patterns from their computers, tablet devices and smart phones

Immediate account information and long-term data storage will be deposited in the Microsoft Azure Data Center

Secure Internet

⊞ **Microsoft Azure Storage**

MDMS

VN Server

The VN Server processes all incoming and outgoing data

All communications are sent through a Virtual Private Network

verizon wireless

VN Products communicate with local cell towers at super off-peak hours

innov8-VN   innov8-VNr

Innov8-VN registers or innov8-VNr stand-alone units measure water and monitor consumption patterns

innov8-VN
Electronic register for new meter or retrofit applications

Compatibility list
- Sensus SR-II
- Sensus Precision
- Metron
- Badger
- Neptune
- Elster-AMCO

Check with your local T2 Rep for pending models

innov8-VNr
Stand-alone modem for connection to registers

Compatibility list
- Metron
- Sensus Encoder
- Hersey
- Elster-AMCO
- Ultrasonic
- Badger Pulse & Encoder
- Neptune Encoders
- Switch Closures
- Active Pulse
- Master Meter
- Magmeter

T² TRANSPARENT TECHNOLOGIES™
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