Smart Enough for Smart Cities

Video surveillance is a crucial component in the development of smart cities. VNS offers myriad of innovative security features from IoT to cyber security and artificial intelligence to cloud computing woven across its IVA platform to meet the requirements of smart security in smart cities.

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VNS VIDEO NETWORK SECURITY
Intelligent Security for the Connected World...

About
Video Network Security

VNS – Video Network Security is an innovative, AI powered video surveillance & security solutions provider wholly owned by Video Network Security, headquartered in Anaheim, California, USA with a mission to provide cutting-edge, reliable, secure, end-to-end, IP based security and smart video surveillance solutions using artificial intelligence, machine learning and IoT innovations that enable our customers to transform their vision to value.

With strong credentials and commitment to exceed our customers' expectations VNS will continue on the path to deliver innovative and superior technology solutions that will provide clear value and competitive edge to our customers and ensure higher return on their investment through smart, intelligent, open, and affordable solutions with limitless scalability.

VNS expertise is the result of more than 100 years of combined industry and customer experience of its founders that is delivered through subject matter experts across the organization, who can assess, precisely determine and design solutions for customer's specific security needs. VNS has also worked closely with numerous security consultants to assist in designing and developing innovative solutions for their end clients. VNS commitment to customer success extends to dedicated development, strategy, pre and post-sales support and business development teams that work together to optimize results for our customers.

Prevent

Provide innovative and superior video surveillance and AI solutions, designed for early detection to help prevent criminal activities and to provide actionable intelligence in a timely manner to thwarter infiltration and damage to organizations, premises and its occupants.

Protect

On the ground or on the move, VNS AI powered smart solutions are made to effectively protect people, assets and investments across global boundaries, individual organizations, premises and operations that must be safe guarded and protected from internal and external threats.

Progress

We are committed to exceeding our customer expectations and empowering them to focus on their core business progress, therefore VNS offer various analytical tools and business intelligence to improve operational efficiency for key vertical market clients including, utilities, retail, education, banking and government.

Prosper

Prosperity of modern businesses necessitate securing both physical and virtual boundaries and our deeply integrated cyber security options offer customers protection and peace of mind. Our suite of innovative analytics tools and business intelligence has proven effective to improve revenue and reduce operational cost for businesses.

Why?
Video Network Security

Video Network Security is an ISO Certified company from USA with ISO 9001:2015 and ISO 14001:2015 certification, an internationally recognized standard that ensures that our design and development of Video Surveillance System in Security and Protection System meet the needs of our clients through an effective quality management system.

VNS offers extensive range of HD, 4K, 8K, smart surveillance cameras, recorders, accessories and central management software with many industry's first and unique features that offers superior results and commercial advantage for customers.

ISO 9001:2015   ISO 14001:2015   SIRA   ONVIF®

XLight   Vcom   Vpix   VIR

- Best of breed USA & EU solutions.
- Best return on asset.
- Building blocks approach & future proofing.
- Total solution from engineering / design / implementation from a single source.
- Compliant with SIRA, SAMA & MOI regulations.

- Best total cost of ownership.
- Extensive multi sector experience.
- Best known industry names in their class.
- Powerful dashboards & features for enterprise customers.
- Best commercial and innovative technology package.

Netavis Native Cloud VMS
Secure, Open, Intelligent & Limitless...

Build in the cloud for the cloud, from ground up. Netavis Cloud VMS gives customers limitless options to integrate and securely access live and recorded surveillance camera feeds in real time across the globe. Smart cities and other customers can choose to integrate surveillance cameras with or without local NVR or Server based storage and capitalize on secure cloud storage at their preferred data center or other hosted data centers distributed across global boundaries.

Video Surveillance as a Service - VsaaS

With the Netavis VMS Cloud flexibility, customers and Internet Service Providers (ISP) have a choice for on-premises storage or off-premises hosting options. The Netavis Cloud Observer VMS software and associated AI based video analytics and Netavis Security Cockpit modules with sMart Data Warehouse can be installed on the premises to keep full control of confidential data and free choice of hardware or alternatively the VMS can be in the Cloud as Video SaaS hosted by

an ISP. Many ISP's are making the investment in surveillance and data center infrastructure to help both SMB and Enterprise customers with the CAPEX constraints, with the option to provide surveillance video content based on monthly billing options. Either local or in the Cloud, Netavis VMS offers the same limitless scalability, intelligence, security and open platform that customers in over 40 countries have enjoyed for decades.

Core Security Objectives in a Smart City

Reduce Crime & Create Safer Communities

Proactive Intervention and Quick Response

New Economic Development Opportunities

Crowd & Traffic Management

Common Operational Picture Management

Effective Data Driven Decision Making

Identification of Criminals & Witnesses

Business Intelligence Analytics

IoT Scalability & Open Integration Platform

IVA ecosystem can support Smart City with the integration of innovative technology into a strategic approach to scalability, flexibility and sustainability.

- Safe city will not be successful and sustainable without engagement with key stake holders in both public and private sectors.

- IoT will simplify content and data(including VSS alerts) sharing in all directions while making scalability simple and manageable.

Smart and Safe cities are being launched across the globe and in the Middle East region, from Saudi Arabia to Egypt, that require capturing and analyzing data from devices, assets and people to improve their daily life.
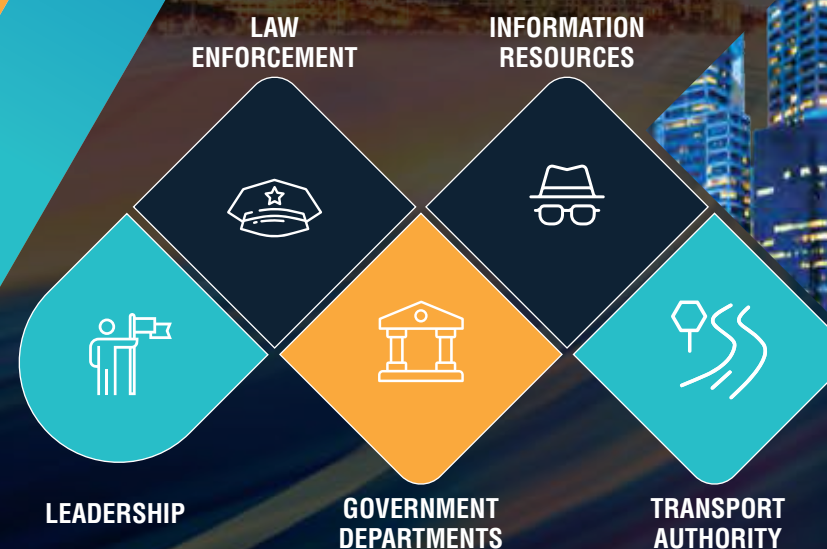
The concept of safe city is an integral foundation of a smart city. Safe city is highly dependent on integrating communication gear, video sources, external sensors, analytics and management software. IoT innovation is the glue that binds these diverse devices and apps, that enables interconnectivity and seamless integration possible. Safety and security also goes beyond the limits of physical security and include the virtual boundaries through cyber security to ensure access to the security infrastructure is well protected from damage and manipulation through hacking.

Leveraging IoT innovation and AI technology, the Intelligent Video Alliance(IVA) underpinned by cyber security and deep integration with specialist technology partners, is an ideal platform to provide scalable video surveillance for safe cities application and to enhance security in a smart city.

Core Security Objectives Envisaged

- IoT will enable sharing of user specific contents with different stake-holders.

- COP will provide global view and centralized content management.

- Active participation in security policies and information exchange are essential for a credible platform.

Leveraging IoT innovation and AI Technology to the fullest IVA is an ideal platform for video surveillance in safe and smart cities…

LAW ENFORCEMENT

INFORMATION RESOURCES

LEADERSHIP

GOVERNMENT DEPARTMENTS

TRANSPORT AUTHORITY

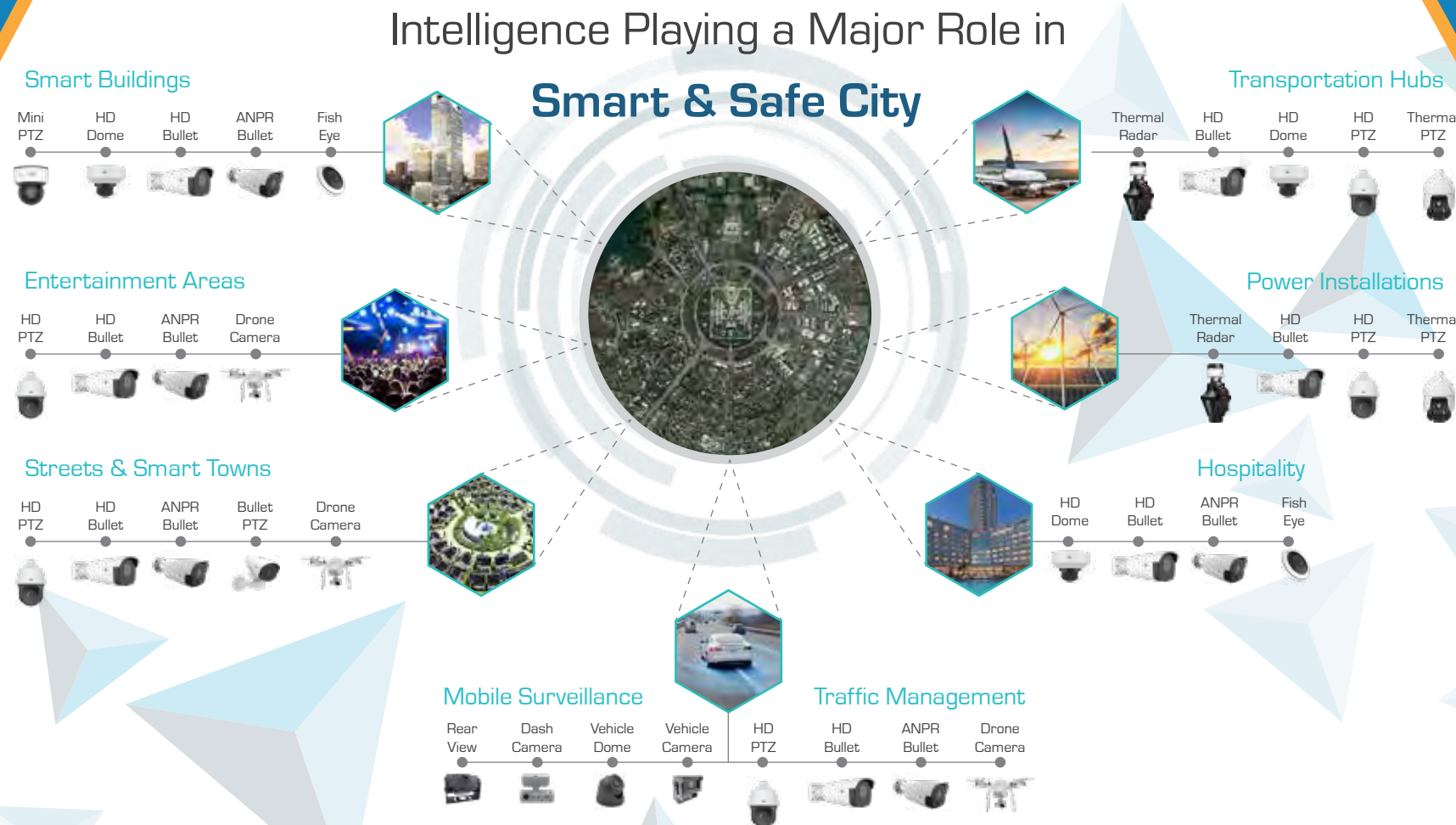![Intelligent Video Alliance logo] **Intelligent Video Alliance**

VINS

Extremely robust field sensors (HD IP, 4K, Fisheye, 360, Thermal Fever Detection and PTZ), Servers/NVRs & accessories with industry breakthrough technologies, XLight, H.265+Vcom & VIR. Full scalability of hardware & software. Innovative StellarVu CMS designed for mega projects & extensive management dashboards.

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Netavis Observer VMS, iCAT Analytics Suite, sMart Data Warehouse with optional AI solutions from ANPR to NIST highest rated facial recognition system & industry's most advance/powerful health monitoring, business intelligence & management reporting system, called Security Cockpit to provide extensive statistical data.

Intelligent Video Alliance - IVA

IVA (Intelligent Video Alliance) platform consist of 4 world class "specialized" solutions that are deeply integrated & optimized to offer benefits, that are second to none in the industry. All IVA participants are specialist in their respective businesses and produce purpose-built solutions only for the HD Video Surveillance with key focus on, Cyber Security, AI, IoT and Deep Learning applications.

Intelligence Playing a Major Role in
Smart & Safe City

Smart Buildings
Mini PTZ | HD Dome | HD Bullet | ANPR Bullet | Fish Eye

Entertainment Areas
HD PTZ | HD Bullet | ANPR Bullet | Drone Camera

Streets & Smart Towns
HD PTZ | HD Bullet | ANPR Bullet | Bullet PTZ | Drone Camera

Transportation Hubs
Thermal Radar | HD Bullet | HD Dome | HD PTZ | Thermal PTZ

Power Installations
Thermal Radar | HD Bullet | HD PTZ | Thermal PTZ

Hospitality
HD Dome | HD Bullet | ANPR Bullet | Fish Eye

Mobile Surveillance
Rear View | Dash Camera | Vehicle Dome | Vehicle Camera | HD PTZ

Traffic Management
HD Bullet | ANPR Bullet | Drone Camera

SECURE LOGIQ

Purpose built HD Surveillance Servers / Recorder with fastest performance, biggest storage, most resilience & best value. Optimized for Netavis Security Cockpit. VMS & VCA on a common server with industry's best health check dashboard & crystal-clear savings on energy & space usage.

barox

Cisco compatible, purpose built industrial network switches for HD video surveillance with integrated power management, Graphics User Interface, End Point Monitoring & Control, Cyber Security with Layer 2 & Layer 3 and health monitoring dashboard.

Unique Benefits of IVA Platform

IVA platform has engineers that are not only experts in system installations and integration, but also have been instrumental in crafting customized and diversified solutions like City Surveillance Systems, Data and Disaster Recovery Centers, Command and Control Centers, Response Management Systems, Mobile Surveillance Vehicle, Automatic Number Plate Recognition System (ANPR) and Red Light Violation Detection (RLVD) system to help maintain smooth flow of traffic and imposing motor vehicles rules efficiently for safe commute in to any Smart & Safe City.

Onvif **PSIA**

Integration with more than 4,500 models of IP devices from different manufactures with full Onvif, PSIA and RTSP protocols support

Observer Video Management

sMart Data Warehouse

iCAT Video Analytics

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One Platform, Three Components

For nearly two decades, Netavis have been delivering video technology, that increases the efficiency of professional security systems. For retail and industrial processes, Netavis provide perfectly tailored solutions that add business value to CCTV installations or go completely beyond security application. Netavis Solutions combine Video Management, Video Analytics and our unique Data Analytics tool, all in one integrated platform.

Accurate Facial Recognition

Accuracy scores of 99.87% can be achieved under ideal conditions, provided there is uniformity and consistency in the FOV for lighting and positioning and the facial features of the scanned subjects are clear. The problem is these ideal conditions are nearly impossible to achieve under real-world conditions.

Netavis in collaboration with its USA technology partner, with a legacy of expertise and innovation in digital media, video compression, rich metadata, and solutions that intelligently scale on massive distributed networks across diverse topologies and augmented by the latest AI research has enabled the framework for the NIST highest facial recognition platform offered through its innovative iCAT analytic suite.

Performance in Adverse Condition

Illumination

Wild Face

Makeup

Visa Face

Intelligent Safety technologies for surveillance, search, detection and identification.

Sensors

Inter Connectivity - IoT

Command & Control

Intelligent technologies of crisis management to support decision making, early warning, monitoring and learning to build trends and automated responses.

Video Content Analytics
Analytics Suit with Advance Artificial Intelligence

With a strong pedigree in industrial automation and analytics, netavis iCAT bundle provides comprehensive video analytics most suitable for smart city applications. Both local and cloud based VMS options provide flexibility.

CUSTOMER #147
MALE, ESTIMATED AGE: 65-75
TIME SPENT: 58 MINUTE

CUSTOMER #962
MALE, ESTIMATED AGE: 35-45
TIME SPENT: 3 MINUTES

CUSTOMER #536
MALE, ESTIM...

iCAT Native Analytic Bundle
- Smart Motion Detection
- Object Counting
- Privacy Masking
- Camera Sabotage
- Object Entering/Leaving
- Directional Alarms
- Object Detection
- Object Starting Stopping, Loitering
- Heat Maps/Crowd Density

- Loitering Detection
- Crowd Monitoring
- Theft Control
- Prohibited Area Monitoring
- Vandalism Detection
- Foot Traffic Monitoring
- Perimeter Detection

- 3D/4D Sensor Integration (Optional)
- ANPR Arabic Number Plate Recognition (Optional)
- Enterprise Facial Recognition (Optional)
- Face Detection (Optional)
- Gender Segmentation
- Age Segmentation
- Engagement Level
- Enterprise People Counting

TransPorter

Simple, Smart & Safe

The most comprehensive mobile video surveillance and intelligent transportation solution, using industry-leading Artificial Intelligence & video telematics devices.

Front View
AHD Camera

Rear View
AHD Camera

Side View
AHD Camera

Dome
AHD Camera

Dome
AHD Camera

Side View
AHD Camera

Forward Collision Warning

Headway Monitoring Warning

Lane Departure Warning

Closed-eyes Detection

Yawning Detection

Smoking Detection

Cell Phone Calling Detection

VNS TransPorter is a suite of portable, advanced mobile video recorders specially developed for vehicle surveillance solution and intelligent transportation applications. With the most advanced hardware design and comprehensive and reliable firmware, TransPorter Series MDVRs supports video recording in IP or HD analog format to ensure maximum flexibility and system security.

TransPorter offer a wide choice of vehicle mounted cameras, accessories and specialized software for different transportation applications including, school buses, ambulances, public transportation, logistic vehicles, cash carrying vehicles, law enforcement vehicles and hazardous material moving vehicles.

TransPorter support CAN-BUS and fleet management system integration to provide critical vehicle data wirelessly through connectivity via 3G, 4G and WIFI to provide maximum flexibility. With Central Management System software and remote client monitoring applications it also achieves alarm linkage, central monitoring, remote management and playback analysis.

State of the Art
Video Surveillance Solution for
Banking Operations

Financial institutions are prime targets for criminals across the globe. With an aim to help banks fight and deter sophisticated criminals, VNS team consisting of SME's, IT and financial security experts have developed a specialized video surveillance solution. The solution also help banks meet the compliance requirements of the authorities having jurisdiction, such as SAMA and Central Banks.

Cyber secure IP communications between end points and across the entire surveillance network.

Metadata indexing and integration of POS and ATM transaction data.

Evidential quality still images and HD video for face detection and facial recognition.

Power management of surveillance equipment and advance notification of potential equipment faults including IP cameras.

VNS offers Video Surveillance solution with advanced analytics for multiple facets of banking operations, ranging from ATMs to branch offices, cash centers to data center and corporate operations to mobile banking operations.

Combining the best in IP camera breed, cyber secure network switches with highly advance VMS and smart analytics, using deep learning and artificial intelligence, VNS BanKIT solution can adopt to different physical environments of any banking operation and provide valuable data for bank managers and marketing teams to improve, security, operational efficiency and attractiveness of their environment for the benefit of attracting more customers.

Unique Camera Features

Vcom **V**pix **V**IR **X**Light

Video Network Security, LLC, USA has R&D center in Anaheim, California with a primary goal to research, develop and establish strategic cooperation with other emerging and disruptive technology inventors to offer most innovative features in our hardware and software solutions.

Vpix Technology

As established earlier that primary purpose of video surveillance is to see clearly any time of the day or night, in all weather and lighting conditions, therefore security cameras need to be well designed to produce high-resolution and vivid color images in different lighting conditions. When insufficient light enters the sensor due to very low light in the scene, the infrared ray can be a good option as a light compensation method to help display black and white images. VNS applies unique Vpix design to achieve accurate and sensitive detection of real surveillance scene illumination. VNS Basic Series cameras are implemented with Vpix technology to protect your investment and provide longer product life than competitive models.

The innovative Vpix makes enormous transformation through an Image Signal Processor smart algorithm that is combined with our advanced sensor which has a particular pixel photo receptive performance to appreciate precise day and night changes. The sensor is more effective to detect illumination of captured information with its high-precision pixel units before image signal processing.

XLight Technology

The primary purpose of video surveillance is to see clearly any time of the day or night, in all weather and lighting conditions. IP cameras must be well designed to provide high resolution and clear quality images in different lighting conditions. The XLight technology is an innovative technology that delivers vivid color, appropriate brightness and extremely good and clear images in extreme-low light conditions. XLight technology vastly improves the image brightness with a large Iris design & BSI back illuminated sensor. With the specially designed large size sensors, VNS IP cameras have higher photo sensitivity and feature high Signal-to-Noise Ratios.

Recommended Applications

XLight technology meets the surveillance requirements of users for high-quality images needed throughout the day or night. The VNS XLight cameras can be used in many applications, where low light is expected including, parking lots, malls, airports, hotels, hospitals schools or any low-illumination scenes that users need.

265+ **V**com Technology

Unlike conventional video compression technologies which try to reduce storage costs by sacrificing resolution and frame rate indiscriminately, Vcom chooses to use "IRP" (Intelligent Region Perception) to detect motion in each frame. Hence, scenes containing interesting information could be preserved while the other relatively static areas such as lawns, white walls could be squeezed to save storage.

To reduce bandwidth, Vcom applies dynamic GOP (Group of Pictures) technique, the picture tends to be static, the GOP is elongated, while it tends to be movement, the GOP becomes shorter. Meanwhile, it uses V.I (virtual I frame) to ensure that media has a keyframe that contains critical information so that the NVR can run the Frame Accurate Search and Quick Playback.

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City of Vienna

Coca-Cola

Shell Petroleum

IBM

Copenhagen Airport

TNT Express

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