



Internet of Things: Gaining Efficiencies with Biometrics

Stay Ahead of the Curve with a Proactive Approach to IoT

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INTRODUCTION

Organizations of all sizes, geographies and industries are experiencing rapid change. The need to connect a broader range of devices (machinery, cameras, vertical instruments, in-building systems, etc.) to the internet raises significant concerns for IT groups. Aging, legacy technology is increasingly expensive to maintain and cannot support the functionality businesses and users demand today. Organizations of all sizes are flocking to cloud services but often struggle with the associated compliance, control, integration and cost implications.

Adapt or be left behind—that's the stark reality organizations of all types and sizes operate within today. Because the need to change is constant, organizations must become smarter in how they prepare for and respond to new challenges and opportunities. They must become less reactive and more proactive. They must become a smarter enterprise.

Smart enterprises utilize technology to improve how people communicate, collaborate, learn and work. Those same technologies help to optimize the business, increase visibility and control, improve safety and security, and drive competitive advantages.

This paper explores solutions that address market trends faced by end-user organizations of all types. By taking a proactive approach to the Internet of Things (IoT), organizations of any size can simultaneously address concerns, optimize their business and create new value for customers, partners and employees.

INTERNET OF THINGS: GAINING EFFICIENCIES WITH BIOMETRICS

When people think of the Internet of Things (IoT), images of sensors on large machinery or medical equipment often come to mind. Others think of internet-connected thermostats, traffic signals, fitness trackers, household voice assistants or kitchen appliances.



IoT is a popular buzzword in the technology industry, but it has become a cornerstone of the intelligent network edge within flexible, dynamic network environments. In fact, potential IoT devices can be as imaginative as they are practical. Enterprises that are implementing IoT typically need devices that fall into the latter camp—they need to improve security, safety and operational efficiency.

The good news is that the potential to unlock IoT and create business value has become much more attainable. The required processing power has increased and prices have decreased. ROI can often be proven solely on the basis of safety (i.e., by mitigating liability). The combination of these benefits is compelling more organizations to take advantage of IoT.

Video Monitoring = Practical Safety and Security

The use of video monitoring technology is on the rise worldwide. Physical surveillance cameras are being installed in public and private spaces to improve safety and security. Police/security officers commonly wear body cameras. Many of these devices are IP-enabled, which adds to the network and IoT potential. Leveraging video brings in an IoT element that's not as invasive as RFID or Wi-Fi radio tracking.



IoT devices generate a significant amount of data. Add video to the mix, and the available data multiplies. Adding biometrics and analytics to the equation is an absolute game-changer in how the volumes of data can be put to work.

How is all that data put to use? How is it processed? Does it impact the underlying transport? Does it require a new network and infrastructure? Many discussions begin with improving safety and security. Video monitoring, IoT, biometrics and analytics are already delivering value in these areas.

| Campus | Enterprise | Law Enforcement |
|---|--|---|
| <ul style="list-style-type: none"> ✓ Detect crowd congregation in public areas and notify security for management ✓ Prevent theft and fraud on student meal plans via facial recognition verification ✓ Monitor parking areas for theft prevention and safety; identify unpermitted vehicles | <ul style="list-style-type: none"> ✓ Multi-level authentication access control into office spaces ✓ Secure area monitoring ✓ Video geo-fencing to secure a property's perimeter from trespassers ✓ Customization for unique customer experiences and improved engagement | <ul style="list-style-type: none"> ✓ Object, person, and vehicle counting ✓ Crowd management monitoring ✓ Identify lost people and persons of interest |

Optimizing Business and Driving Revenue with Video Analytics

In addition to safety and security, organizations in many verticals are leveraging analytics to improve back-end tasks. Video biometrics and analytics are the tools that automate the process of setting business workflows into motion.

Retail



Revenue generation: Utilize video monitoring and analytics for crowd tracking and to recognize customer demographics for targeted marketing, set signage and product placement prices for vendors, and reduce point-of-sale wait times by allocating staff to speed the checkout process.

Fraud prevention: US merchants lost nearly \$3 billion to counterfeit card fraud in 2015, per The Nilson Report. Credit cards with embedded security chips are not thwarting savvy thieves. Progressive retailers are utilizing biometric authentication for point-of-sale transactions, rather than easily manipulated PIN and signature-based cardholder identification.

Reduce operational costs: Retailers that use biometrics for point-of-sale and secure-area access are reducing costs by eliminating the need to constantly issue or replace lost keys, swipe cards, passwords and PINs. Per M2SYS Technology, one end-user organization saved 18 hours per IT employee per year and re-allocated those hours to higher-value tasks after switching to biometrics from other authentication methods.

Hospitality



Contextual sales and marketing: Per Oracle research, 33% of restaurant operators and 72% of hotel operators believe that guest recognition via facial biometrics will be in use within the next five years. Facial recognition and analytics identify customer demographics, with the information used to position appropriate products and services supported by the correct marketing and sales messaging.

Customer loyalty: Employ facial recognition to identify, integrate with property management systems, and more efficiently serve guests. Per Oracle research, 31% of restaurant guests and 41% of hotel guests will be more likely to visit an establishment with greater frequency if they are recognized by an employee without having to give their name or show a loyalty card.

Guest confidence: Biometrics may be utilized to streamline and secure routine functions, such as adding fingerprint authentication to hotel guest room safe access, as well as securely billing hotel restaurant and shopping charges to the appropriate guest room. Oracle research states that 49% of restaurant guests and 62% of hotel guests believe that having this recognition would improve their experience.

Healthcare



Medical record accuracy: Per Ponemon Institute, 64% of healthcare executives said patient misidentification errors occur frequently or all the time. A patient's biometric data, including face, fingerprint or palm scans, can be associated with their electronic medical records to correctly identify them on return visits, auto-retrieve the correct medical history, and reduce latency and error associated with manual entry and record lookups.

Patient proximity: Identify patients via facial recognition as they move about facilities, using alerts to notify staff when they near or cross boundaries (i.e., exits, secure areas, etc.) that compromise their safety and facility security.

Prescription dispensing: An ECRI report found that 9% of 7,600 wrong-patient events resulted in temporary or permanent patient harm or even death. By using biometrics, in-facility and in-home patients can be quickly and accurately identified and matched to their prescriptions, with automated logging of time, dosage and administering clinician.

Key Takeaways: Stay Ahead of the Curve

As advanced as they sound, these solutions are not futuristic; they are the reality today and will be even more commonplace tomorrow. Facial recognition and biometric analytics are an attainable, non-intrusive value-add to existing video monitoring systems that produce practical and accurate insights for safety, security and streamlined business processes. IT decision makers can stay ahead of the curve by advancing their organization's capabilities today.

THE LAST WORD

Many IoT discussions begin with safety and security needs, yet the Internet of Things can have a much farther reaching impact. However, most IT organizations need help to unleash the potential benefits.

Because most IT organizations lack the internal resources to simultaneously take on such strategic projects and also focus on day-to-day operations, it's smart to align with an expert provider to:

- Deliver both technology and services
- Effectively leverage big data, IoT, and network intelligence
- Help identify and prepare for emerging business needs
- Improve compliance and business continuity through intelligent infrastructure
- Allow IT and the workforce to focus on core competencies

Today's technology environments and business requirements are complex. Every component touching your organization's network is inherently interconnected, with a ripple effect emanating from nearly every change. A strategic plan is needed to address today's priorities and prepare for tomorrow's requirements. This is where a partnership with a trusted provider has the most impact in helping your organization become and remain a smart enterprise.

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