Managing Video as a Strategic Asset:
Your Video Infrastructure Checklist

Across government, video increasingly is seen as a mission-critical capability. Unfortunately, many agencies rely on outdated systems that cannot keep pace with the requirements of today's mission-critical video surveillance systems. It's not just about achieving faster throughput: It's about improving your agency's ability to capture, protect and leverage video data as a strategic asset, while reducing total cost of ownership (TCO).

To what extent is your agency treating video as a mission-critical resource? GovLoop and Pivot3 – which provides intelligent hyperconverged infrastructure (HCI) solutions purpose-built for mission-critical video solutions – collaborated on this worksheet to help you assess the maturity of your video operations.

Here are the hallmarks of a mature video infrastructure. Check all that apply at your agency.

Performance

- ☐ Infrastructure is optimized for write-intensive video workloads
- ☐ Infrastructure capacity and performance resources aggregated and available to every camera, eliminating the risk of frame drops and image degradation in the event of hardware failure

Resilience

- ☐ Video data, security systems, access controls and video analytics all remain available and accessible, if disks and/or an appliance are unavailable
- ☐ Storage remains online, virtual servers automatically restart, and recorded video remains protected and accessible – all without redundant software, licensing or hardware

Simple at Scale

- ☐ Server and storage resources can be deployed as needed, minimizing unnecessary cost and overprovisioning
- ☐ As camera counts grow and new technologies are integrated, storage, compute and bandwidth can be scaled linearly, and non-disruptively, as additional appliances are added
- ☐ Store large amounts of video in a compact footprint with higher density platforms
- ☐ Servers and storage can be combined into a single infrastructure designed to support video recording management, access control, analytics and related applications
- ☐ Single-pane-of-glass management, designed for ease of use by non-technical personnel
- ☐ Video can be accessed on any device anywhere, anytime

The Take-Away:

To manage video data as a strategic asset, agencies need a smart infrastructure that is purpose-built for mission-critical video – one that is designed for video-based workloads, reduces risk and liability, and is simple to manage.

Purpose-Built: Recognize the Difference

HCI combines server and storage resources in modular appliances to provide high performance, scalability and simplified management. But is general-purpose HCI a good fit for mission-critical video systems, or do you need HCI that is purpose-built for video? Circle your preferred capabilities:

Considerations	HCI Purpose-Built for Mission-Critical Video	Conventional HCI
Frame Rate	Optimized to capture every frame at any frame rate	Optimized for read-heavy workloads (databases), not write-heavy workloads (video)
Data Resilience	Protects data through a fault tolerance method known as Erasure Coding, a more storage-efficient resilience method than replication	Relies on replication for data protection which consumes more available capacity and has substantial performance overhead, making it impractical for real-time processing of video data
Hardware Failure	Uninterrupted performance in the event of component failure	Cannot handle node failures without substantial performance degradation
Scalability	Easily scale up with cost-optimized storage-only nodes (a plus for video, when storage growth out-paces compute needs)	Requires you to buy more costly full-HCI nodes (which means deploying compute power that you don't need)

Are you Still Relying on NVRs?

The network video recorder (NVR) was the industry standard for video surveillance for many years. However, with the growing sophistication of video surveillance systems – and the growing importance of video data – NVRs have become obsolete.

Here are four reasons that NVRs can't meet the demands of mission-critical video:

- NVRs typically are based on Direct Attached Storage devices, which are not designed to handle the highly variable bandwidth and intense throughput requirements of video
- The only way to "scale" NVRs is to add more NVRs, which requires complicated provisioning, constant management and manual load balancing
- When NVRs fail, recording stops and both live and recorded video becomes inaccessible
- When any component of an NVR fails, recording stops and both live and recorded video is inaccessible and possibly lost

To take full advantage of video data, work with a vendor that understands what it takes to manage video as a strategic asset for a wide variety of use cases -- from security, traffic analysis and facility utilization to energy management, production optimization and telehealth. The applications are endless. Pivot3 offers a purpose-built infrastructure optimized for video capture, video monitoring and video analytics, helping to simplify how you manage and extract value of out of your video data.

Specifically, with Pivot3 you can:

- Cut TCO in half
- Reduce video storage requirement by 50%
- Reduce footprint and management by 85% vs NVRs
- Reduce power and cooling
- Reduce software management and maintenance costs

To learn more visit, **pivot3.com/product/surveillance/**