

Security Camera Service

Introduction and Improvements

JOSEPH STANLEY

SUBJECT MATTER EXPERT
SECURITY CAMERA SERVICE

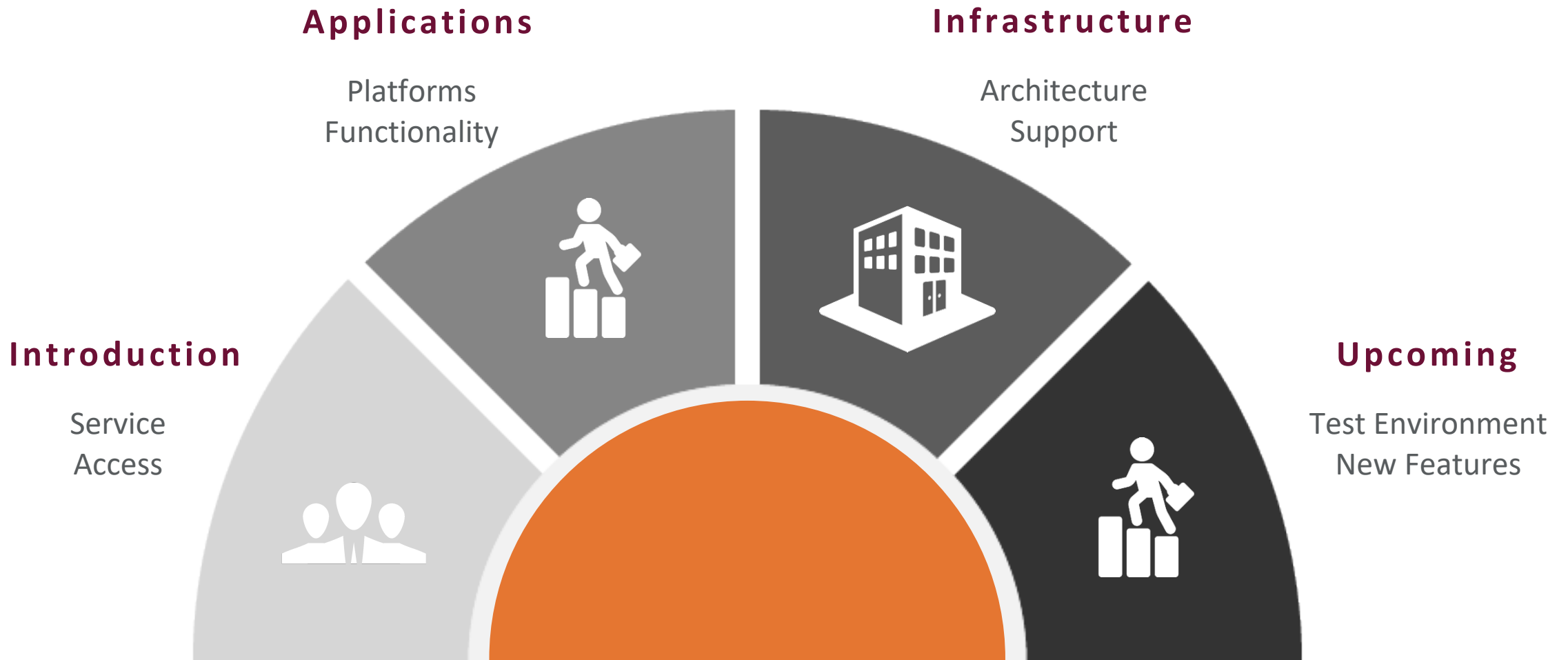
LUDWIG GANTNER

DIRECTOR, COMMUNICATIONS &
EMERGENCY TECHNOLOGIES

NETWORK INFRASTRUCTURE & SERVICES
DIVISION OF INFORMATION TECHNOLOGY



Agenda



Service Overview



**Deter crime and
assist in protecting
the safety and
property of VT
community**

Enhance Quality of Life
Integrate Best Practices
Safety and Security Technologies

Policy 5617



**Protect individual
privacy rights**

University Core Values
State & Federal laws
Regulate use of the system

»Enable Public Safety & First Responders

Collaboration

Service Users:

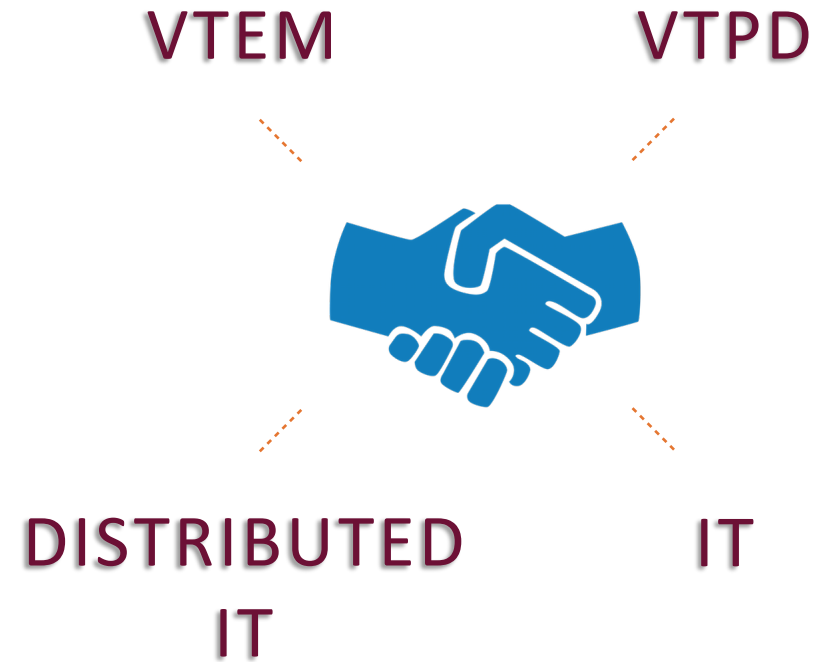
- ✓ University Departments

Roadmap and service strategy:

- ✓ VT Police Department
- ✓ VT Emergency Management

Policy 5617:

- Surveillance Oversight Committee
- 15 day video retention



Support

Charged with the successful operation, maintenance, and development of all services in the campus unified communications system and in the emergency communications program.

Single support team

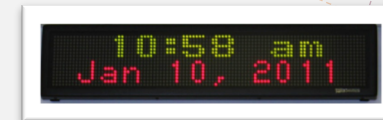
Support more than 670 cameras

Support program growth
of ~ 100 cameras / year

Investigate, develop, and implement
new features and functionality

Services

**UNIFIED
COMMUNICATIONS**



VT ALERTS

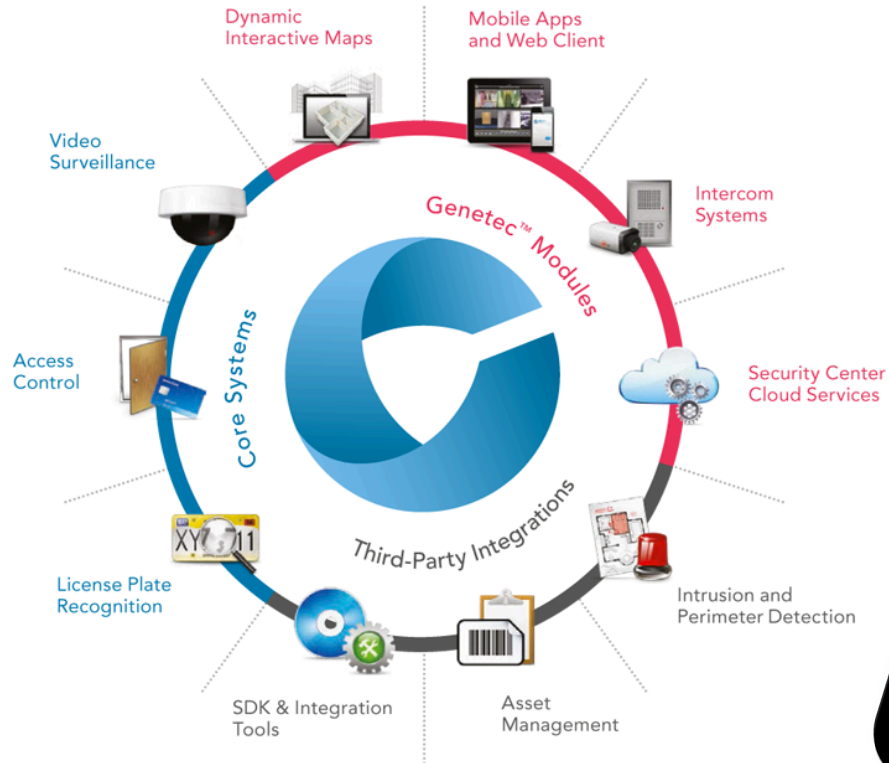
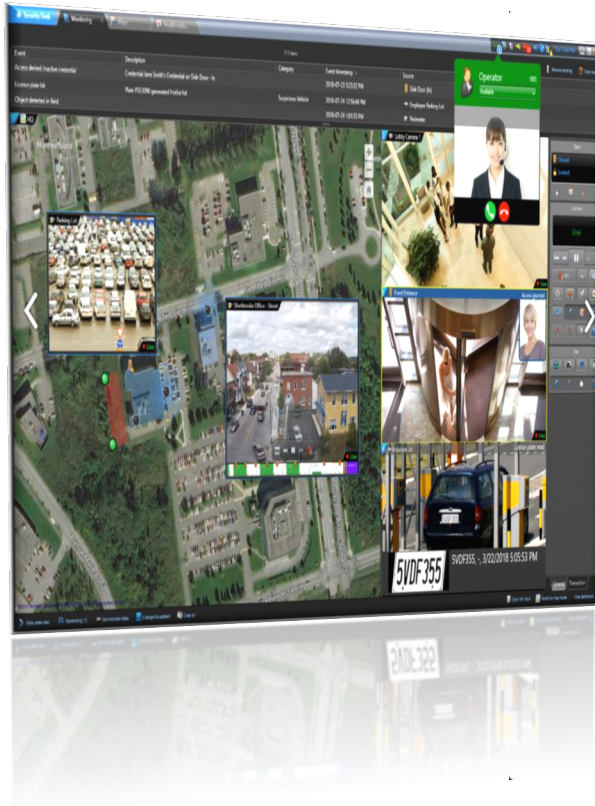


**SECURITY
CAMERAS**

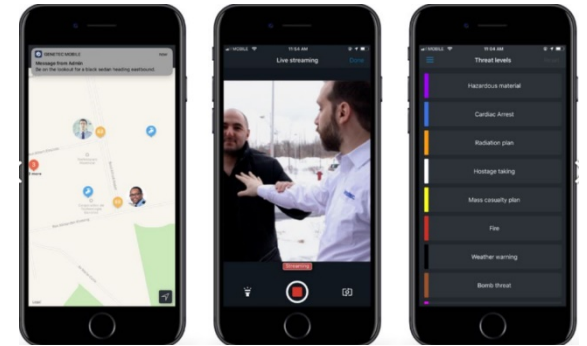
Applications

Platforms

Software Based



Mobile Application



Web Client



Features

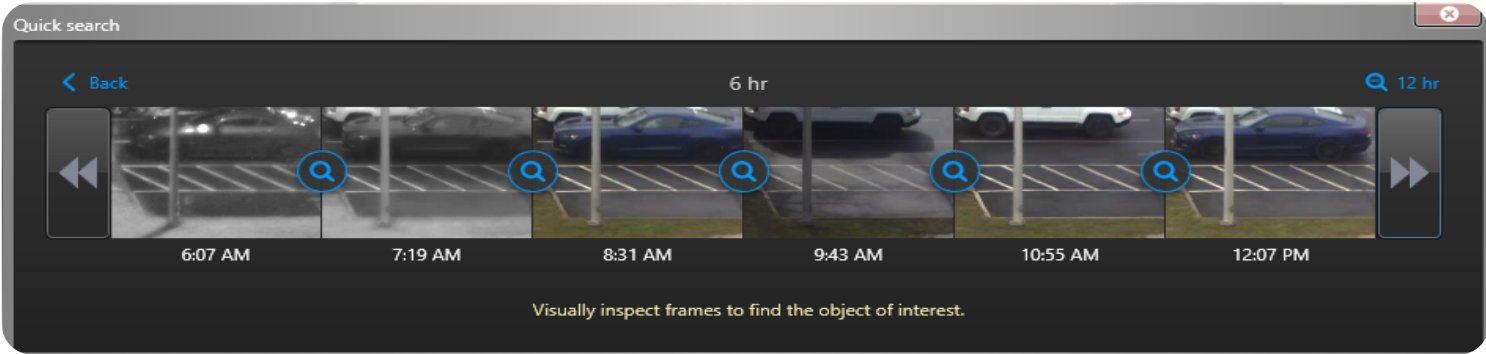


Multiple Views

Named List

▶	Ambler Johnson Hall	
▶	Andrews Information Systems (AISB)	
▶	Architecture Annex	
▶	Armory	
▶	Beamer-Lawson Indoor Athletic Training Facility (IATF)	
▶	Blacksburg PD	
▶	Burrows-Burleson Tennis Center	
▶	Burruss Hall	
▶	Cassell Coliseum	
▶	Cassell Coliseum Parking Lot (lot 1)	.34.19
▶	Hahn-Hurst BB Practice Facility Parking Lot	.34.18
▶	Sidewalk/Washington St 1/4 (Ambler-Johnston)	.34.17
▶	Sidewalk/Washington St 2/4 (Dietrick)	.34.17
▶	Sidewalk/Washington St 3/4 (Dietrick)	.34.17
▶	Sidewalk/Washington St 4/4 (Pritchard)	.34.17
▶	CNS Warehouse	
▶	Cochrane Hall	
▶	Dietrick Dining Hall	
▶	Drone Park	
▶	English Baseball Field	

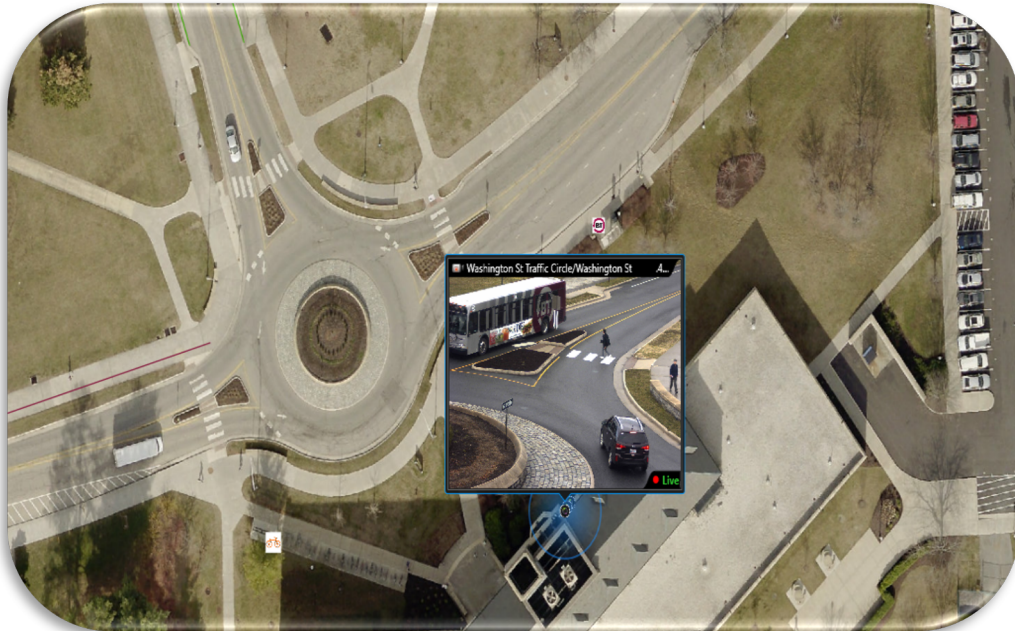
Quick Search



Outdoor Mapping Implementation



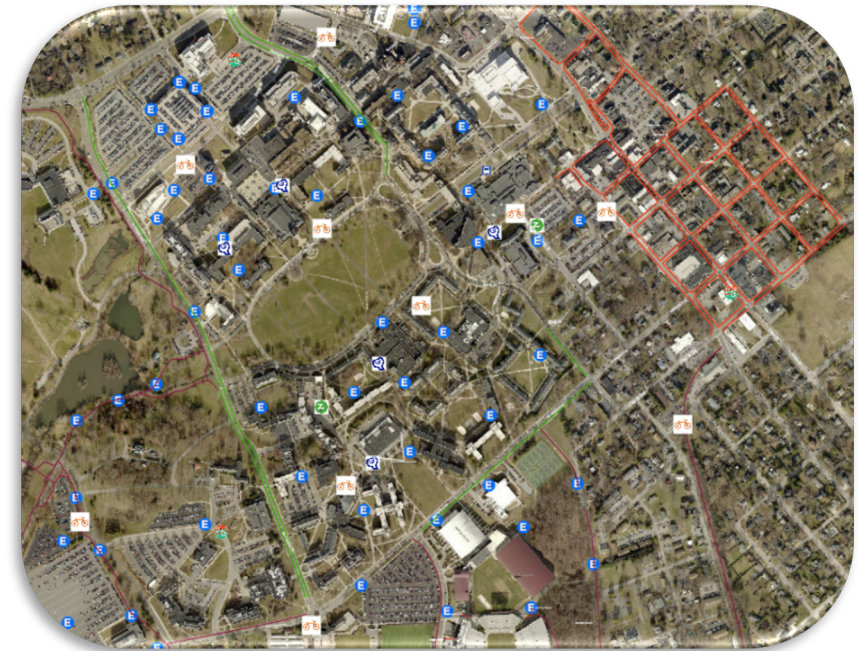
ArcGIS



Zoom in for camera pop-up view



Road Closures



Numerous layers available

Visual Tracking



Visual Tracking



Visual Tracking



Visual Tracking



Infrastructure

Security Camera Architecture

- VT
- NVC

IP Camera



Network



Archiver



- Storage increase 40%
- 240 TB -> 320 TB

Directory Server



- Authenticate users
- Manages device access



Management Tools



Bigfix for server management

- Single console endpoint management platform
- Security Patches and OS Updates
- Manage heterogeneous environment
- bigfix-users-g@vt.edu



OEM utilities for camera updates

- Individual application for configuring cameras
- Individual or Bulk updating
- Able to remotely update network parameters, firmware, etc.
- Only limitation is client/camera has to be on same subnet



Latest security is applied to servers and cameras as soon as available.

Monitoring and Reporting

Genetec Report

Cam Status Report		Page 1
Report Title:	Cam Status Report	
Run Date and Time:	03-05-2020 09:00:00 AM Eastern Standard Time	
Run by:	Joseph Stanley	
Table name:	Incident	
Query Condition:	Active = true AND Assignment group = NS-Communications Systems AND Configuration Item = Security Camera AND State = Active or: State = On Hold or: Resolved = 03-04-2020 12:00:00 AM	
Group by:	Incident state	
Sort Order:	Created in descending order	

System State Report

IBM Spectrum Protect
Command Line Administrative Interface - Version 8, Release 1, Level 6.0
(c) Copyright by IBM Corporation and other(s) 1990, 2018. All Rights Reserved.
Session established with server YACHT: Linux/x86_64
Server Version 8, Release 1, Level 8.000
Server date/time: 03/05/2020 07:00:44 Last access: 03/05/2020 07:00:43

Transparency

ServiceNow Report

Report : Health issues report					
User : Service					
Date : 3/5/2020 9:00:00 AM					
Number of query results returned : 26					
Entity type	Entity	Source	Health	Maintenance	Entity path
Role	ArchiveEven	CAMMAST02	Offline	Maintenance enabled indefinitely	
Camera	Merryman Athletic Facility Gym 1/4 34.31	ArchiveEven4	Offline	Maintenance enabled indefinitely	Z Work Zone
Camera	Merryman Athletic Facility Gym 2/4 34.31	ArchiveEven4	Offline	Maintenance enabled indefinitely	Z Work Zone
Camera	Merryman Athletic Facility Gym 3/4 34.31	ArchiveEven4	Offline	Maintenance enabled indefinitely	Z Work Zone
Camera	Merryman Athletic Facility Gym 4/4 34.31	ArchiveEven4	Offline	Maintenance enabled indefinitely	Z Work Zone
Camera	Merryman Athletic Facility Weight Room 1/4 34.32	ArchiveEven4	Offline	Maintenance enabled indefinitely	VT/Merryman Athletic Facility
Camera	Merryman Athletic Facility Weight Room 2/4 34.32	ArchiveEven4	Offline	Maintenance enabled indefinitely	VT/Merryman Athletic Facility
Camera	Merryman Athletic Facility Weight Room 3/4 34.32	ArchiveEven4	Offline	Maintenance enabled indefinitely	VT/Merryman Athletic Facility
Camera	Merryman Athletic Facility Weight Room 4/4 34.32	ArchiveEven4	Offline	Maintenance enabled indefinitely	VT/Merryman Athletic Facility
Camera	Merryman Athletic Facility Weight Room Main Entry 34.33	ArchiveEven4	Offline	Maintenance enabled indefinitely	VT/Merryman Athletic Facility
Camera	Old Town Hall Roof 216.252.195.40	ArchiveEven4	Offline	Maintenance enabled indefinitely	VT/Blackburg PD

Health Dashboard

Type	Entity	Source	Health	Entity path	Maintenance
	Old Town Hall Roof	216.252.195.40	ArchiveEven4	Offline	VT/Blackburg PD
	Merryman Athletic Facility Weight Room Main Entry 34.33	ArchiveEven4	Offline	VT/Merryman Athletic Facility	Maintenance enabled indefinitely.
	Merryman Athletic Facility Weight Room 4/4 34.32	ArchiveEven4	Offline	VT/Merryman Athletic Facility	Maintenance enabled indefinitely.
	Merryman Athletic Facility Weight Room 2/4 34.32	ArchiveEven4	Offline	VT/Merryman Athletic Facility	Maintenance enabled indefinitely.
	Merryman Athletic Facility Weight Room 1/4 34.32	ArchiveEven4	Offline	VT/Merryman Athletic Facility	Maintenance enabled indefinitely.
	Merryman Athletic Facility Weight Room 3/4 34.32	ArchiveEven4	Offline	VT/Merryman Athletic Facility	Maintenance enabled indefinitely.
	Merryman Athletic Facility Gym 4/4 34.31	ArchiveEven4	Offline	Z Work Zone	Maintenance enabled indefinitely.
	Merryman Athletic Facility Gym 2/4 34.31	ArchiveEven4	Offline	Z Work Zone	Maintenance enabled indefinitely.
	Merryman Athletic Facility Gym 1/4 34.31	ArchiveEven4	Offline	Z Work Zone	Maintenance enabled indefinitely.
	Merryman Athletic Facility Gym 3/4 34.31	ArchiveEven4	Offline	Z Work Zone	Maintenance enabled indefinitely.

It is important to be proactive instead of reactive.

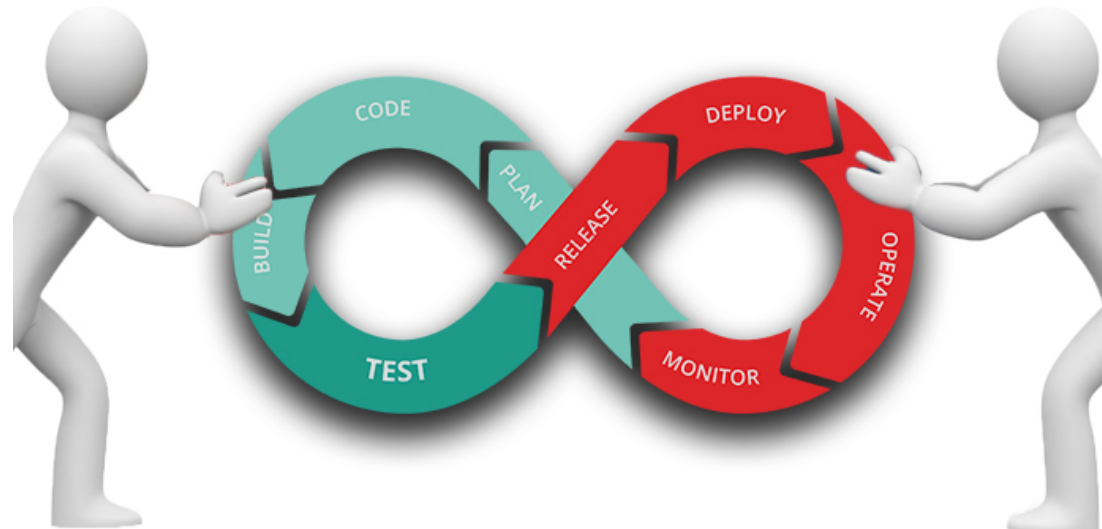
Upcoming

Test Environment

Agile deployment

DEVELOPMENT

OPERATIONS

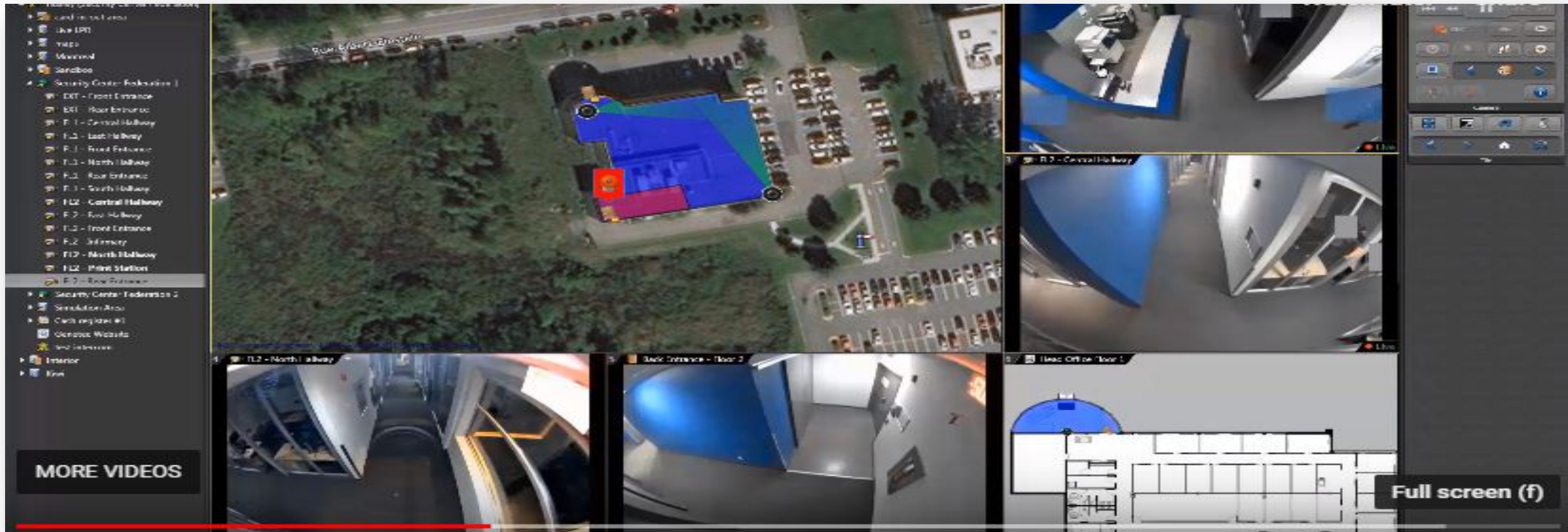


Load and performance testing

New functionalities tested by users early

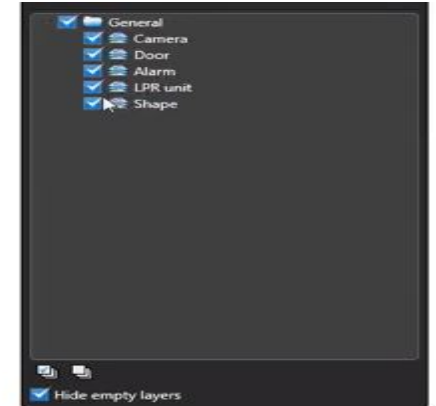
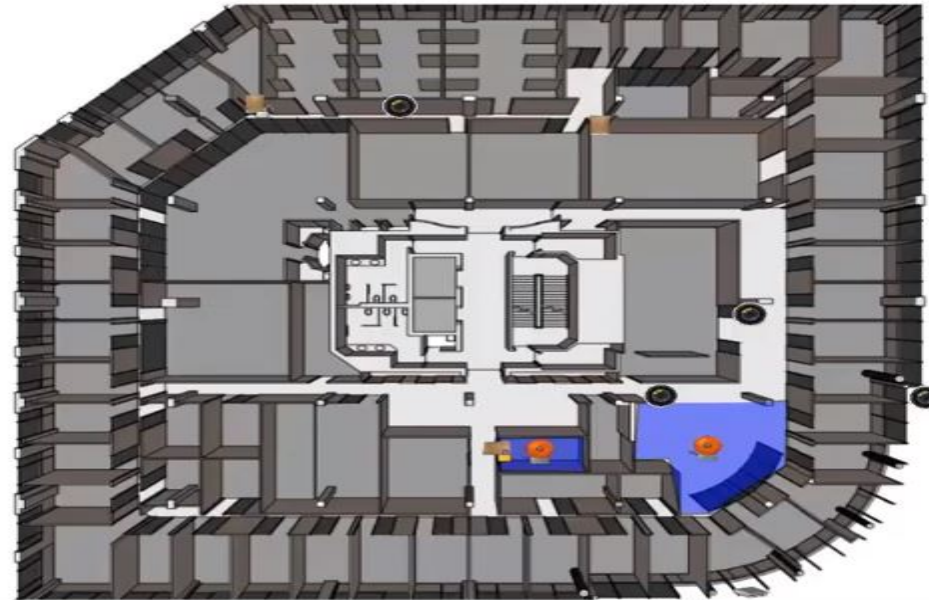
- Repeat process
- More efficient
- Newest software releases

Indoor Mapping



- ❖ Integrate the GIS maps that exist now with new indoor maps
- ❖ Seamless flow from outdoors to indoors
- ❖ Hyperlinks for multiple floor connectivity

Indoor Mapping



Operators can show and hide layers, simplifying the map's content.

- ❖ Shows floor plan throughout building with layers for additional details
- ❖ Pop-up camera views or lasso effect for multiple views
- ❖ Show emergency phones, fire alarm panels, AED units, etc
- ❖ Seamlessly pan back to GIS view

New Features 2020



BriefCam



New Features 2020



New Features 2020

BriefCam



「Questions?



Thank You !

Questions & Answers

»Conference Session

Takeaway Messages

- »It is important to be proactive instead of reactive.
- »Latest technology enables public safety.