

Wisconsin Association
of
School Business Officials



**Security Assessment:
Site Survey & Security Technology**

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Unified School District of De Pere



HOWARD-SUAMICO
SCHOOL DISTRICT
SERVING • LEARNING • ACHIEVING - TOGETHER

2021 WASBO Spring Conference



Wisconsin Act 143



Requires collaborative efforts between schools and law enforcement to conduct On-Site Safety Assessments

- ▶ Consulting with a local law enforcement agency to conduct a required on-site safety assessment of each school building, site, and facility that is regularly occupied by pupils.
- ▶ The on-site assessment should include playgrounds and athletic facilities or fields.
- ▶ The on-site safety assessment should be submitted to OSS annually, however, the assessment does not need to be conducted annually. OSS only needs to know the date of the last assessment when submitting the annual assessment. The due date for the first submittal was January 1, 2019.

Security Assessments

- A School Security Assessment is critical to identifying risks and security weaknesses for any organization.
- A School Security Assessment can help to identify gaps in a security program so that an organization can reduce risks and vulnerability.
- A School Security Assessment may identify policies, procedures, security hardware, and technology that can reduce risk.
- A School Security Assessment must be conducted to meet an adequate standard of preparedness.

Elements of a School Security Assessment

- Site Characteristics
- Emergency Operations Plan
- Response and Training
- Technology and Infrastructure
- Hazards and Threat Assessment
- Prevention Policies and Programs
- Recovery Planning

- Best conducted by third parties.



WSSCA

Wisconsin School Safety Coordinators Association

Assessment Categories

- ▶ Climate
- ▶ Emergency Operations Plan
- ▶ Preparation
- ▶ Training
- ▶ Teams & Roles
- ▶ Drills
- ▶ Visitors & Deliveries
- ▶ Threat & Risk Assessment
- ▶ Communications
- ▶ Monitoring & Surveillance
- ▶ Keys & ID's
- ▶ Building Access
- ▶ General Interior
- ▶ General Exterior



WSSCA
Wisconsin School Safety Coordinators Association

Security Assessment EXAMPLE- Exterior Doors



- Act 143 requires all exterior doors locked during the normal school hours.
- Exception is during times of high usage - e.g. student arrival.
- If doors are unlocked prior to, during or immediately after the regular school day, a designated staff member must be present to visually screen everyone entering the school.

CPTED

Physical Site Survey

Things to keep in mind:



Viewing Angle
Environment
Lighting type, level
Reflectance
Obstructions
Temperature
Humidity
Corrosives
Water
Vandalism

Mounting Conditions -
Cabling
Entry Requirements
Accessibility
“Special” Objects /
Scenes (some examples)
Vehicles
License Plates

Security
Camera
Systems

Physical Access Control Site Survey

Things to keep in mind



Points of Egress for public

Points of Entry for public

Special points of Entry

(I.E. Rec Dept., Fire Dept. Police Dept.)

Student Drop-off and Pick-up



Physical Access Control Site Survey

Things to keep in mind



- ▶ Doors for Employee use
- ▶ Doors requiring higher security
- ▶ Handicap Operation and Accessibility

What CCTV Used to Be



Who?



What?

5.0 MP 2592x1944

(16.4x VGA)

3.1 MP 2048x1536

(10x VGA)

2.0 MP 1600x1200 (6.25x VGA)

1.3 MP 1280x1024

(4.25x VGA)

VGA 640x480



5.0 MP 2592x1944

3.1 MP

2048x1536

2.0 MP

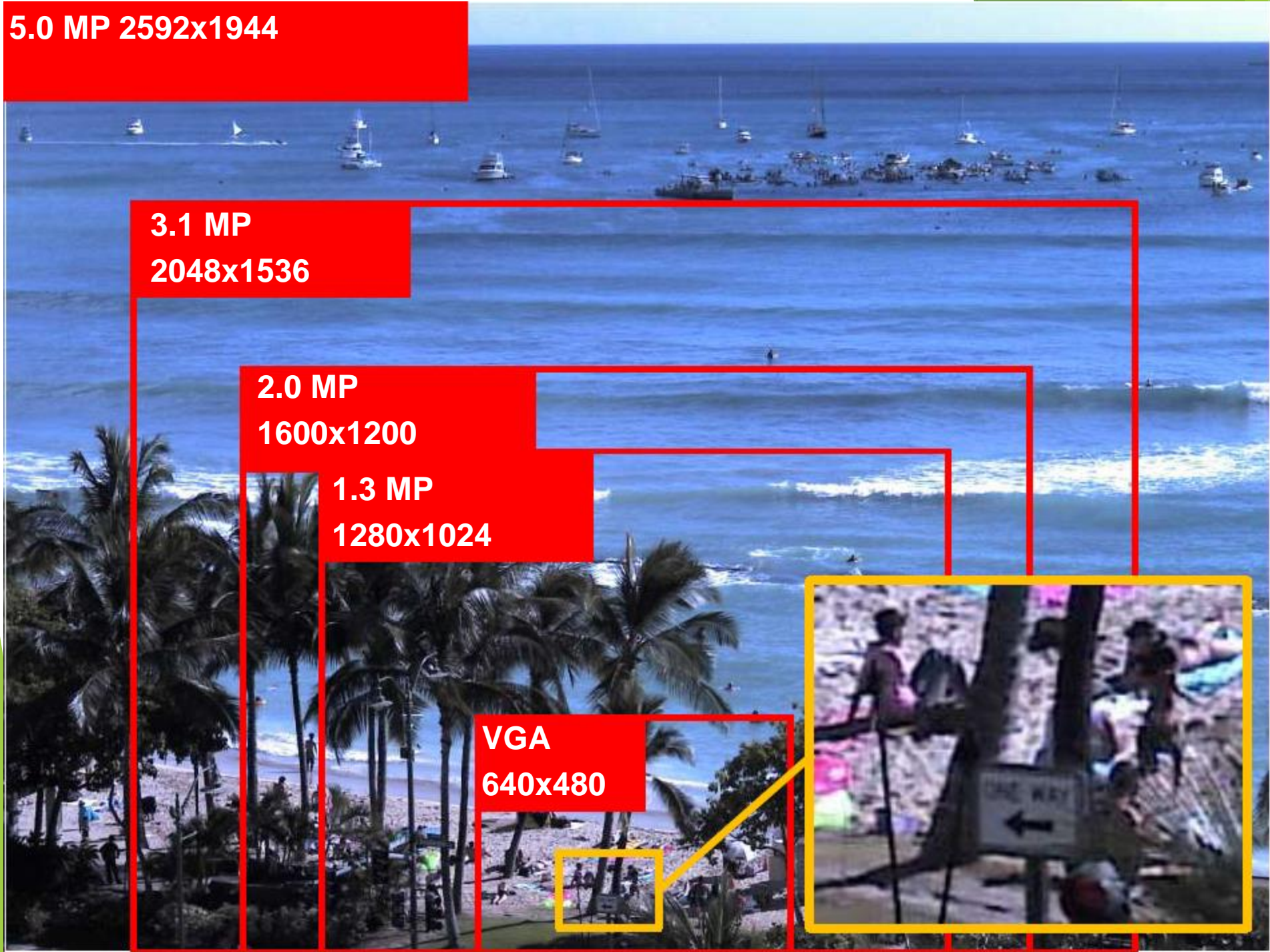
1600x1200

1.3 MP

1280x1024

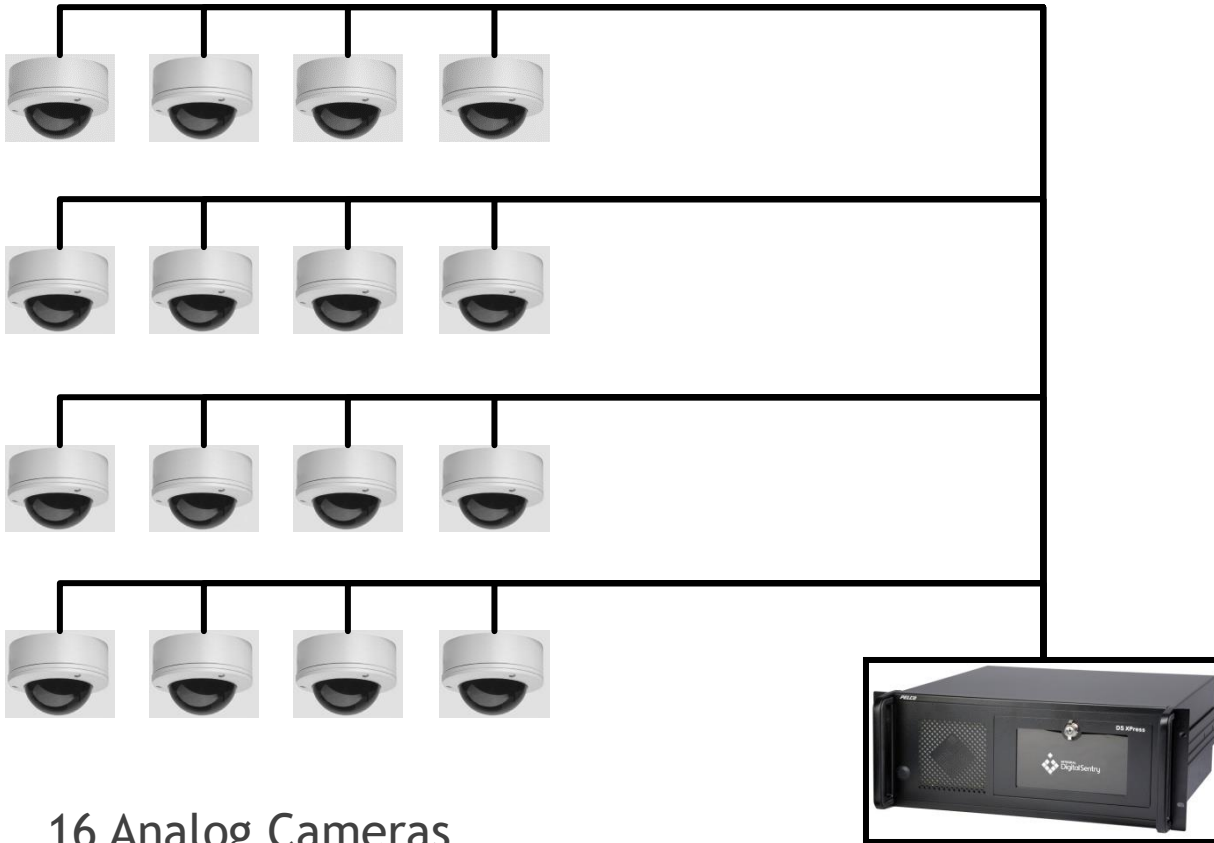
VGA

640x480





Architecture Savings



16 Analog Cameras

16 Channel DVR
Network Video Recorder

One 5MP Camera



Analog Vs. MP



IT Video Surveillance



- **Benefits of Megapixel Cameras**
 - Increased resolution
 - Enhanced digital zooming features
 - All Network Based
 - More adjustability
 - Forensic Digital zoom capabilities
 - Flexible expandability



Main Entry Security



Command



MARCH NETWORKS
COMMAND

10.5.3.104
9/13/2016

NAVIGATION EVIDENCE Lakeview 1st Floor Lakeview Exterior Rm 10... ESC Alphaone Bullen 0

Personal Bullen 0

System

- System
 - Bose0
 - Bratford0
 - Bratford1
 - Bratford2
- Logical
 - ESC
 - ESC Alphaone
 - ESC Door 1 Main E
 - ESC Exterior Rm 1
 - Personal
 - Lincoln Mid
 - Bullen 0
 - Bullen 1
 - Main Entrances

Requesting Media...

Tuesday, September 13

7:30 AM 7:40 AM 7:50 AM 8:00 AM 8:10 AM 8:20 AM

Monday, September 13, 2016 Tuesday, September 13, 2016

HEALTH (96) ALARMS (3) EXPORT

Device	Source	Issue Category	Issue	Rate	Threshold	First Occurrence	Last Occurrence	Count	Description
ITA4	ITA4	Video	Stream Failed	▲	Duration, Frequency	11/5/2015 7:20:12 AM	9/13/2016 8:22:18 AM	113543	There is at least one stream that is not working among the co
Trempel4	Trempel Exterior Door 30	Video	Camera Disconnected	▲	Duration, Frequency	5/31/2016 3:35:09 PM	9/13/2016 8:22:08 AM	15826	Camera connection failed.
ITA5	ITA5	Video	Stream Failed	▲	Frequency	11/5/2015 7:01:05 AM	9/13/2016 8:21:55 AM	40857	There is at least one stream that is not working among the co
ITA5	ITA Rm 1809 Hall East	Video	Camera Disconnected	▲	Duration, Frequency	11/5/2015 6:49:44 AM	9/13/2016 8:21:55 AM	34544	Camera connection failed.

9:23 AM
9/13/2016

ACCESS CONTROL system & Camera costs



ACCESS CONTROL / DOOR ENTRY

Aiphone Master Station	\$ 1,000	Interface station for main entrance buzzer (expandible)
Aiphone Expansion Station	\$ 650	Expansion station
Aiphone IXDF Door Station	\$ 700	Main entrance buzzer with one (1) megapixel camera
Electronic Door Latch	\$ 500	Allows for usage of HID cards and for Aiphone buzzer access
Four-Door Card Reader Head End	\$ 2,500	Head end for HID interface for electronic card access
HID Proximity Card Reader	\$ 200	Allows for proximity card reading
HID Proximity Cards (cost per 100 cards)	\$ 600	Programmable cards for electronic building access

CAMERAS

16-Channel NVR System	\$ 6,000	Mach Networks NVR Camera System
720p (Analog)	\$ 140	
1 MP Digital	\$ 225	
2 MP Digital	\$ 475	
5 MP Digital	\$ 650	
8 MP Digital	\$ 1,700	



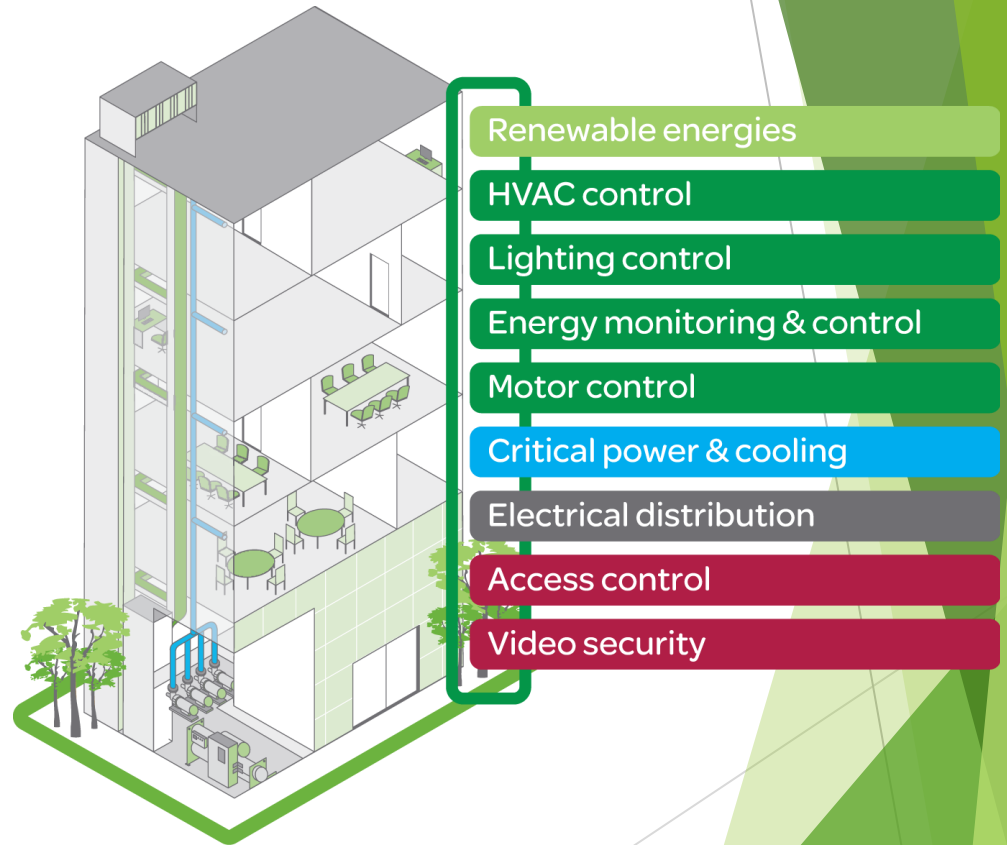
Access Control

- ▶ CCURE 9000 system
- ▶ Mixture of topologies
 - ▶ Many Doors terminated at 1 controller
 - ▶ iSTAR Pro
 - ▶ Up to 16 doors to 1 controller
 - ▶ Four wires from each door location back to controller (up to 400 ft)
 - ▶ One or two doors to each controller
 - ▶ iSTAR Edge
 - ▶ Controller mounted at door
 - ▶ POE device
 - ▶ Short wire runs from door to controller
 - ▶ No power supply needed at location, just a single cat5
 - ▶ Wireless
 - ▶ Schlage AD400
 - ▶ One access point can handle up to 16 doors
 - ▶ No wiring needed, just replace door hardware

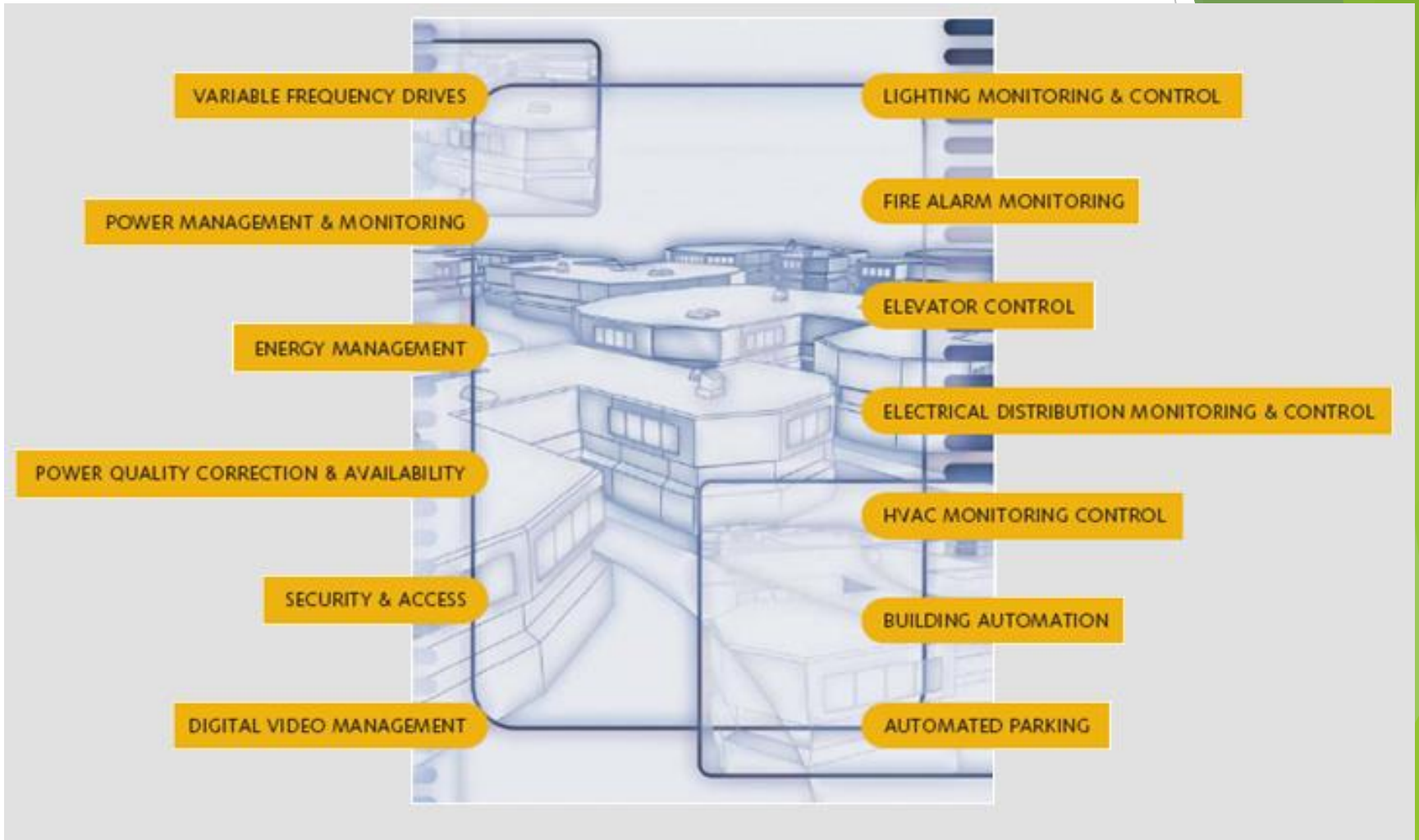
Evaluate System Capabilities (Integration)



- HVAC points and sequences
- Power metering and reporting
- Security and CCTV
- Lighting control
- IT health monitoring
- Fire alarm system monitoring
- 3rd Party HVAC equipment integration (LonWorks, BacNET, Modbus)



Intelligent Schools



VARIABLE FREQUENCY DRIVES

POWER MANAGEMENT & MONITORING

ENERGY MANAGEMENT

POWER QUALITY CORRECTION & AVAILABILITY

SECURITY & ACCESS

DIGITAL VIDEO MANAGEMENT

LIGHTING MONITORING & CONTROL

FIRE ALARM MONITORING

ELEVATOR CONTROL

ELECTRICAL DISTRIBUTION MONITORING & CONTROL

HVAC MONITORING CONTROL

BUILDING AUTOMATION

AUTOMATED PARKING

Intelligent Schools



- **Integrated HVAC Control**
 - **Common Graphical Software**
 - **Bacnet Enabled**
 - **Lon Enabled**
 - **Modbus Enabled**
 - **Integrated VFDs**
 - **HVAC systems with interfaced controls** **MULTI VENDOR**
- **Integrated Surveillance/Security**
 - **Shared Graphical Software**
 - **Video embedded in Graphics**
 - **Automatically adjust Recording FR**
 - **Integrated with Card Access**
 - **Integrated with Lighting Control System**
 - **Integrated with door status**

Intelligent Schools



- **Integrated Lighting Control**
 - **Share Graphical Software**
 - **Share common protocol with Low Voltage Lighting System**
 - **Integrate with Security**
 - **Integrate with Terminal DDC Control**
- **Power Monitoring**
 - **Why monitor your electrical services**
 - **What information can you see**
- **Integrated IT Systems**
 - **Share Graphical Software**
 - **Integrated with Security**
 - **IT System Health Monitoring**
 - Servers**
 - Hard Drives**
 - IP Cameras**

Communication Technology



- ▶ Information is the key to good decisions
- ▶ Information should flow in all directions
- ▶ Provide as much initial information as possible to as many people as possible
- ▶ Use any and all available means: text messages, PA system, digital signage, Internet, Twitter, Facebook, bells, etc.
- ▶ We use our phone system and/or push buttons to trigger an ALERT
- ▶ Also need call 9-1-1 for further details

Alert TECHNOLOGY



Alert TECHNOLOGY



SingleWire Informacast System

- ▶ Uses Cisco phone system - VoIP phone in every classroom
- ▶ *Any staff member can initiate*
- ▶ Triggers an automatic announcement over intercom system at school and notifies the KUSD Emergency Response Team with school name, room number, and video links
- ▶ Automatically locks any electronic latch in the building

INFORM



Using any means necessary to pass on real-time information

► Plain Language

- Who, what, where, when and how
- Can be used by people in the area or who may come into it to make common sense decisions

Inform TECHNOLOGY



Camera System

- ▶ More than 3,500 cameras at 40 buildings
(Average of 87.5 cameras per building)
- ▶ Elementary Schools: 25-50 cameras
- ▶ Middle Schools: 50-150 cameras
- ▶ High Schools: 150+ cameras

Inform TECHNOLOGY



Camera Access

- ▶ Locally at school
- ▶ Educational Support Center via command interface
- ▶ On the Cloud via laptop, tablet, and smartphone
- ▶ Local authorities (command unit, dispatch, squad cars)
- ▶ **LIMIT EXPORTING VIDEO !**

Network Access



A screenshot of a network monitoring software interface titled 'MARCH NETWORKS COMMAND Enterprise'. The interface shows a grid of 60 camera feeds arranged in 10 rows and 6 columns. Each feed displays a live video stream of a different location, primarily main entrances and hallways. Below each video frame, there is a small status bar containing text such as the camera name (e.g., 'ESC Door 1 Main Ent.'), the date and time (e.g., '1/27/2015 8:28:14 AM'), and network statistics (e.g., '0 ips - 20 kb/s'). The interface includes a navigation pane on the left, a top status bar with the user name 'Kevin', and a bottom control bar with various icons for navigation and settings.



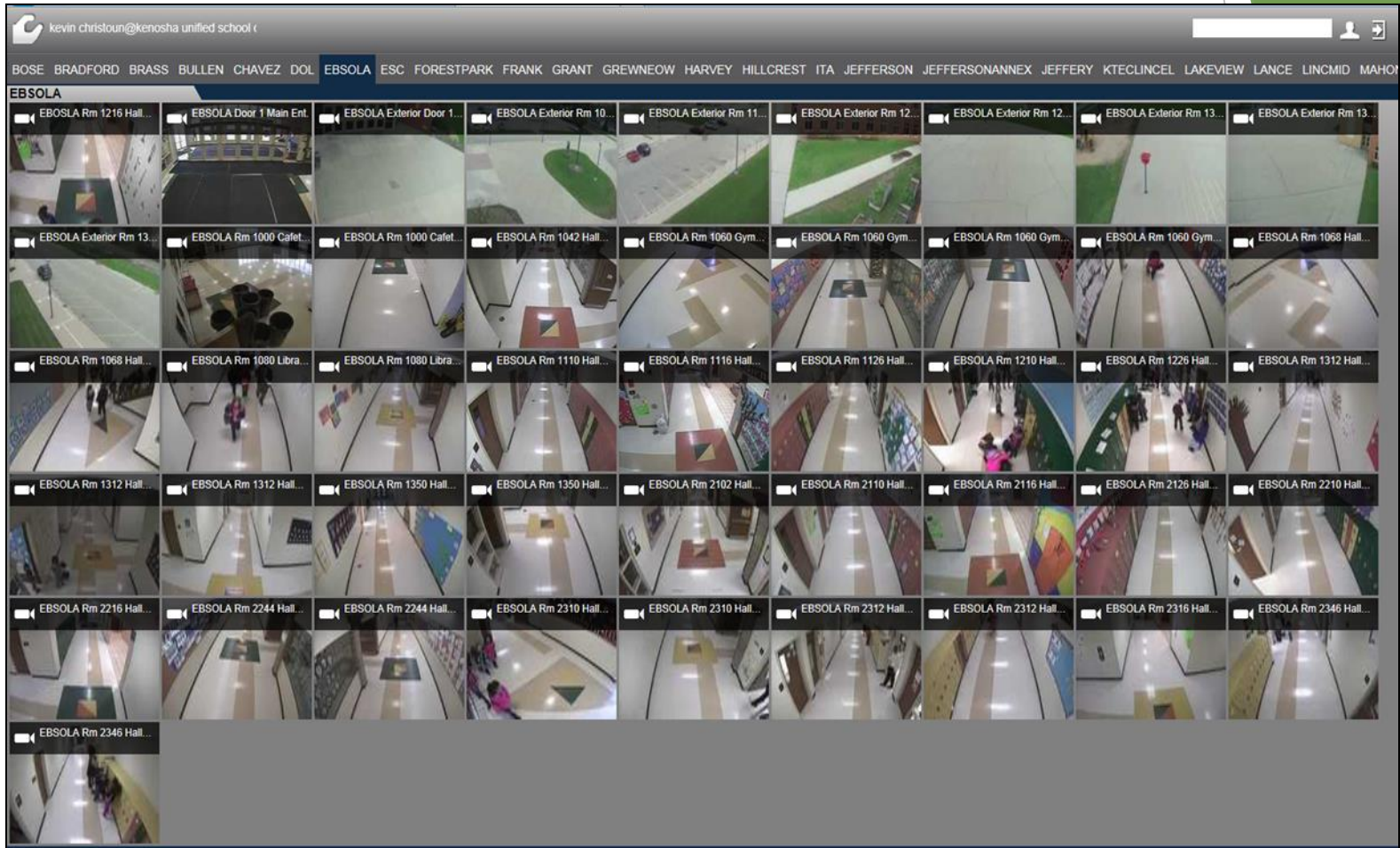
Network Access

- ▶ Previous slide showed main entrances of 36 schools all on one page, all in real time
- ▶ Up to 640 cameras can be shown at once in command center
- ▶ Easy to use - point and click
- ▶ Able to save videos as MP4 or other format
- ▶ Interfaces with the Informacast System

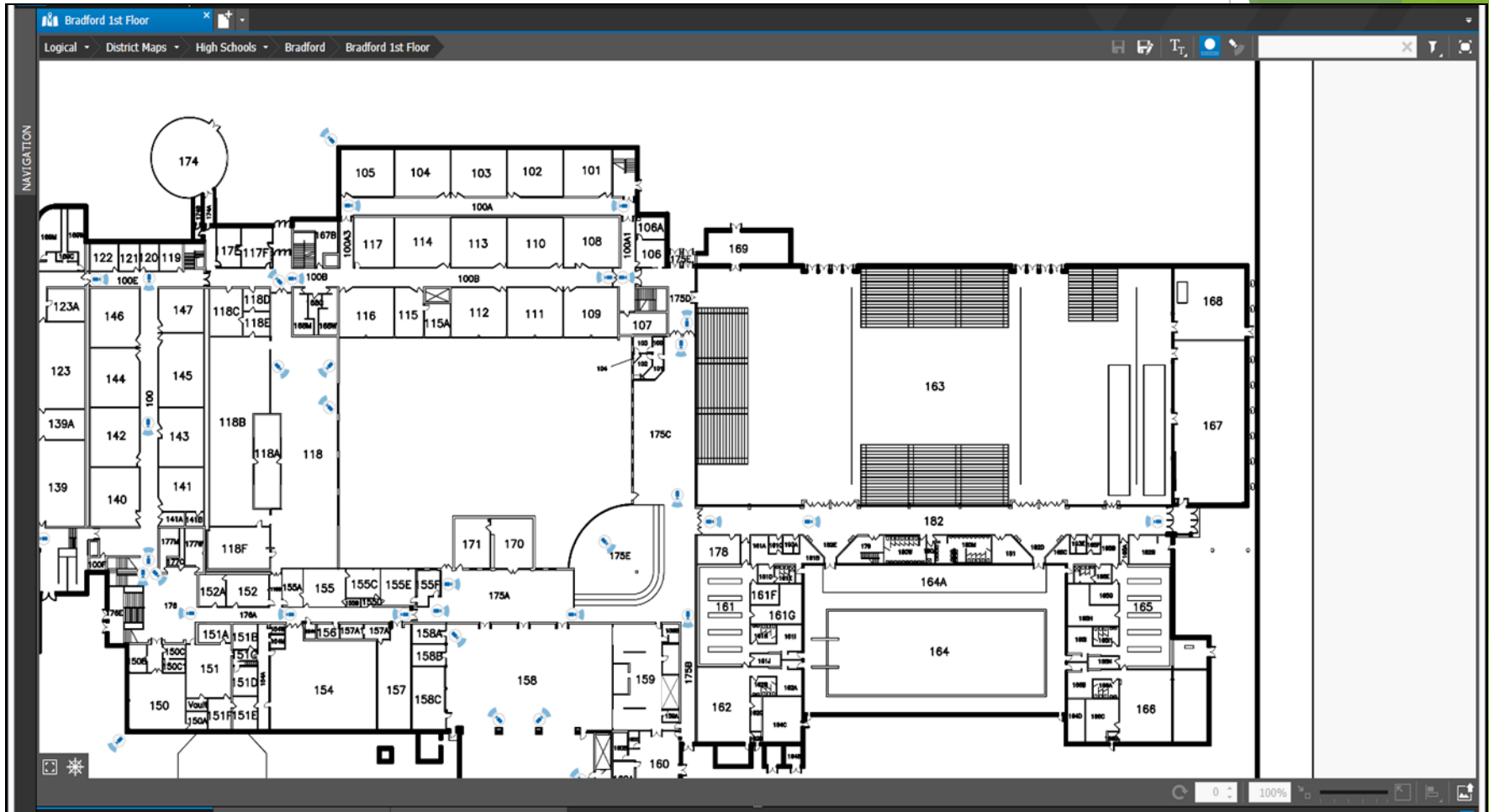
Cloud Access



(Ex: Eagle Eye and Verkada)



Interactive Map





Remote Intercom Access

- ▶ Two locations remote from schools - have access to all cameras and ability to broadcast over the intercom at every school as do our two Police Departments and Sheriff's Department
- ▶ System allows us to INFORM our staff, students and visitors remotely of what the active threat is and where they are in the building
- ▶ Staff in building then can make decisions to change their response to the threat (i.e. may go from LOCKDOWN to EVACUATE)
- ▶ Do you have staff practice making announcements ?



Technology Considerations

- ▶ When evaluating systems be sure to price out systems over a 7 year period. (annual licensing)
- ▶ Be sure vendors clearly identify features and functions in base cost vs. extra
- ▶ Open architecture
- ▶ Mobility Features
- ▶ Is there an app for that ?



WISCONSIN ASSOCIATION OF SCHOOL BUSINESS OFFICIALS



► Questions?

Resources: (links or flash drive)

- [Crime Prevention Through Environmental Design Guidebook](#)
- [School Security Technologies](#)
- [School Grounds and Site Survey](#)
- School Safety Inspection Checklist

Available online: US Department of Education Vulnerability Assessment: <https://www.hsdl.org/?view&did=232984>



THANK YOU !



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