ANIXTER

Infrastructure
as a Platform
by Anixter

NEXT GENERATION COMMERCIAL BUILDING INTEROPERABILITY

Infrastructure as a Platform
by Anixter

How do you define best practices in your commercial building?

Introducing Infrastructure as a Platform by Anixter for an agile, flexible and scalable commercial building.

Commercial buildings are evolving to cater to changes in technology and workplace behavior, while presenting new opportunities to maximize efficiency and productivity. Industry leading companies are demanding versatile buildings that serve as virtual gateways to connect people within an office and around the world. Buildings of the future integrate people and systems in a dynamic and functional way.

Infrastructure as a Platform addresses the key building blocks for smart commercial buildings that can provide agility for budgets, scalability for demand and flexibility for technology choices.

This approach not only addresses the five key technology areas, but it also integrates innovative solutions to meet your assessment and deployment needs.

Anixter's site-specific deployment solutions allow you to more accurately plan projects and improve scheduling, reducing non-productive labor and on-site assembly challenges.

Commercial Building Infrastructure Solutions
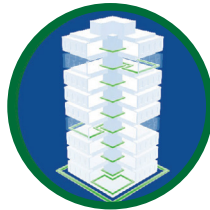
RISK MANAGEMENT: Anixter has defined a **five layered approach to physical security** that provides you with the ability to deter, detect and detain at every layer of your commercial building. This approach reduces the risk of breach and increases your peace of mind.
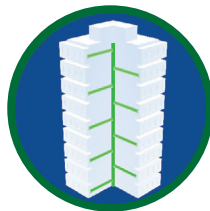
NETWORK PERFORMANCE: More than ever before, a high-performance structured cabling system plays an essential role in operating a smart building. Without it, you cannot achieve the best practices of **versatile physical layer connectivity**, which is required to support multiple applications, cope with increased bandwidth and eliminate network downtime.

WORKFORCE PRODUCTIVITY: Social and economic drivers are placing a larger focus on how workforce behavior can be improved with technology. This presents many challenges to providing **advanced mobility and communications**, including supporting a BYOD environment that enables collaborative business communication with seamless network availability.

SPACE UTILIZATION: With more employees concentrated in smaller spaces and increased demand for dynamic, collaborative areas, **optimizing real estate effectiveness** is important for the productivity and efficiency of employees as well as the building itself.

BIoT™ ENABLEMENT: Enabling the Building Internet of Things (BIoT) allows you to analyze your environment, and make real-time adjustments to improve efficiency and productivity. The **five senses of an intelligent building** address the challenges of open architecture design, supplier integration and migrating to an IP platform.

To learn more about Anixter's approach to helping you solve these challenges, visit **anixter.com/commercialbuilding.**
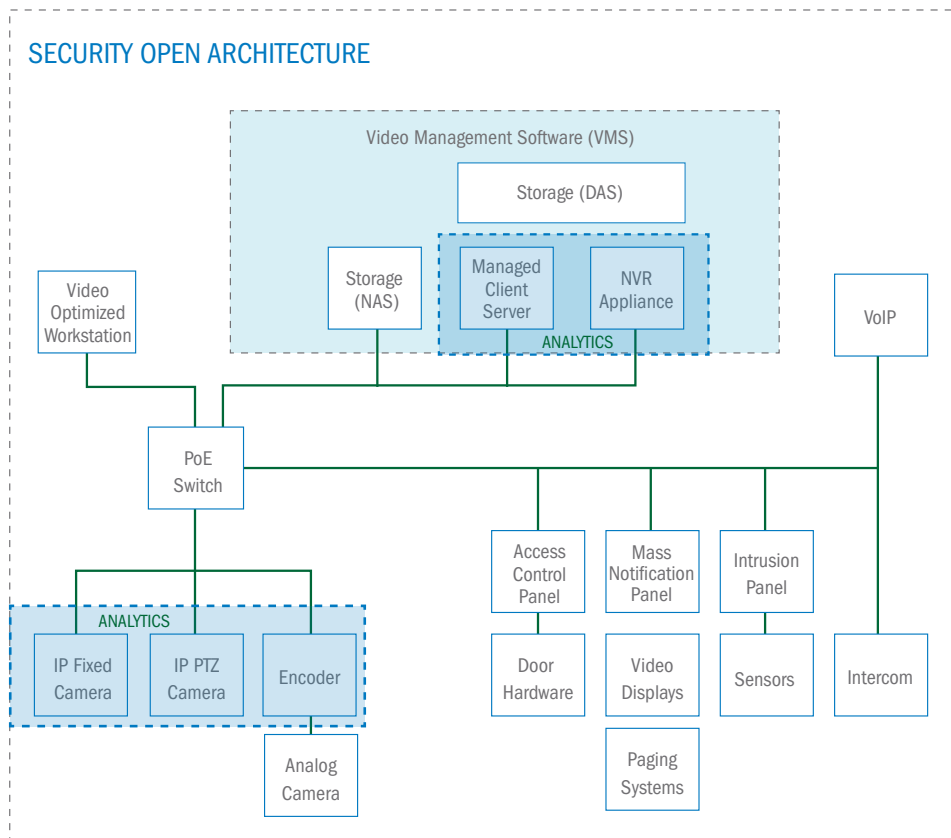
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Increase peace of mind with a layered security approach.
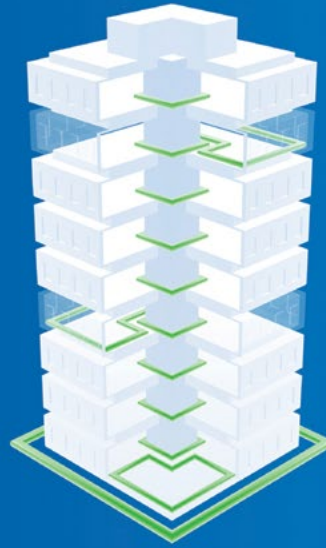
COMMERCIAL BUILDING RISK MANAGEMENT

In today's world, there is a strong emphasis on providing a secure and safe environment for a modern workforce. Reducing risk and increasing peace of mind allows staff to focus on the task at hand.

Anixter's layered physical security approach provides you with the ability to deter, detect, delay, deny, and defend at every layer of your commercial building.

SECURITY OPEN ARCHITECTURE

Video Management Software (VMS)
- Storage (DAS)
- Storage (NAS)
- Managed Client Server
- NVR Appliance
- ANALYTICS

- Video Optimized Workstation
- VoIP
- PoE Switch
- ANALYTICS
  - IP Fixed Camera
  - IP PTZ Camera
  - Encoder
  - Analog Camera
- Access Control Panel
  - Door Hardware
- Mass Notification Panel
  - Video Displays
  - Paging Systems
- Intrusion Panel
  - Sensors
- Intercom

WHAT WE HEAR
Challenges from the various commercial building stakeholders are:

- Providing a **SAFE** workplace
- Reducing **THEFT**
- Achieving **REGULATORY COMPLIANCE**
- Preventing **CYBER THREATS**
- Limiting physical building and network **ACCESSIBILITY**

VISITOR SAFETY

The future of commercial security will see a split between practicing reactive security and proactive security.
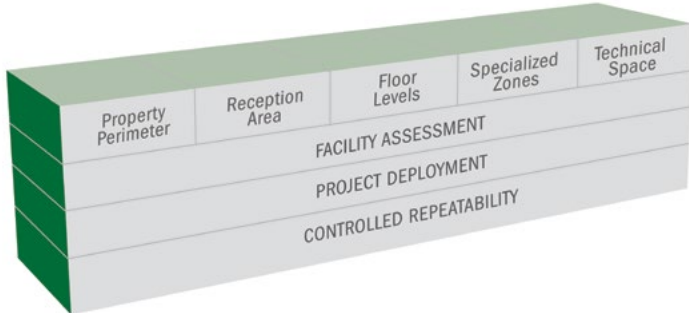
Source: Security Magazine

Infrastructure as a Platform
by Anixter

Infrastructure as a Platform by Anixter provides a practical, configurable and integrated approach to deploy physical security infrastructure into your commercial building environment.

FIVE LAYERS OF PHYSICAL SECURITY
The Anixter Approach

Property Perimeter • Reception Area • Floor Levels • Specialized Zones • Technical Space

FACILITY ASSESSMENT
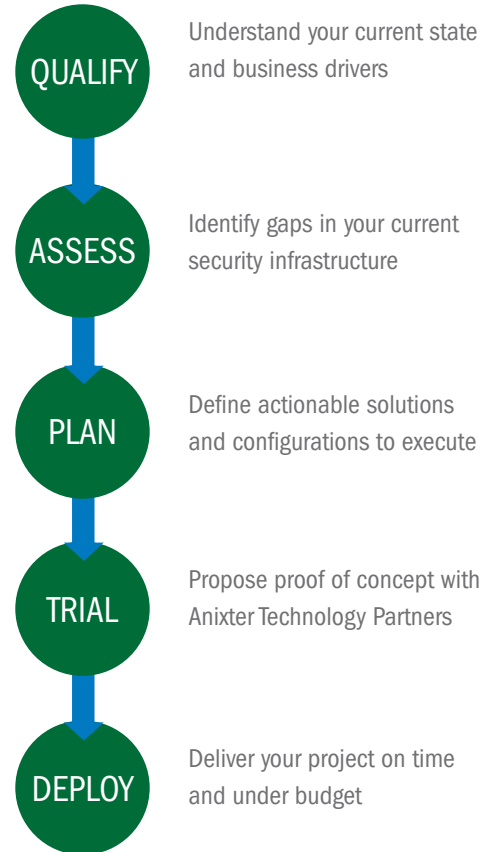PROJECT DEPLOYMENT
CONTROLLED REPEATABILITY

In addition to micro-segmentation of logical security, our approach provides commercial building managers with a clear set of guidelines and best practices for macro-level security implementation.

- **Property Perimeter**
  Establish a physical boundary around the property edge to deter external threats.

- **Reception Area**
  Control visitors to the facility and validate various levels of staff authorization.

- **Floor Levels**
  Monitor visitor and employee traffic for safety and access to various parts of the building.

- **Specialized Zones**
  Secure assets and comply with privacy regulations with attention to specialized departmental zones.

- **Technical Space**
  Protect networking infrastructure, IT servers and data storage in technical areas.

YOUR RISK MANAGEMENT PLATFORM
Anixter Engagement Process

QUALIFY — Understand your current state and business drivers

ASSESS — Identify gaps in your current security infrastructure

PLAN — Define actionable solutions and configurations to execute

TRIAL — Propose proof of concept with Anixter Technology Partners

DEPLOY — Deliver your project on time and under budget

You can further strengthen your protective measures and enable interoperability by leveraging our expertise in technology sourcing, inventory management, product enhancement, logistics and eCommerce tools.

PRODUCT SOLUTIONS
- Video and access control software
- Surveillance cameras
- Servers and storage
- Ethernet switches
- Electronic and mechanical door hardware
- Keypads and readers
- Fire pull stations
- Intrusion motion detectors
- Indoor and outdoor lighting
- Emergency phone towers

Property Perimeter

Reception Area

Work Areas

Specialized Zones

Technical Space

Floor Levels

FOR MORE INFORMATION VISIT **ANIXTER.COM/COMMERCIALBUILDING**

At Anixter, we enable the connected world. By building, connecting, protecting and powering valuable assets and critical infrastructures, we help to sustain and grow businesses and communities worldwide. We accomplish this by offering full-line solutions, technical intelligence, supply chain expertise and an unmatched global distribution network.
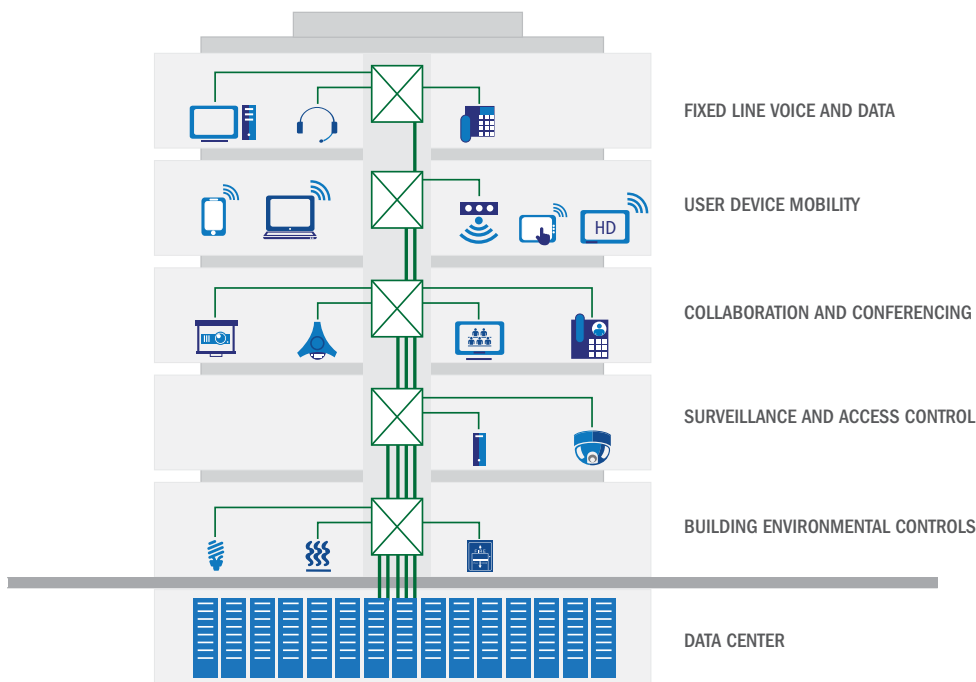
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Does your network keep up with the demands of the modern workforce?
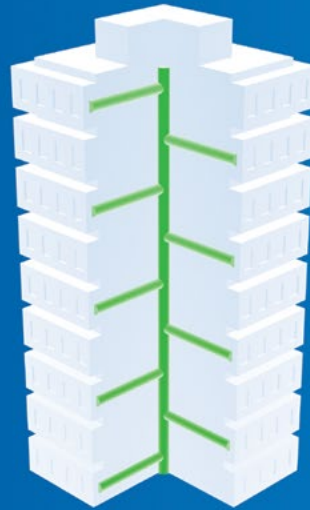
COMMERCIAL BUILDING NETWORK PERFORMANCE

More than ever before, a high-performance structured cabling system plays an essential role in operating a smart building. Versatile physical layer connectivity guides the creation of an open system platform, where the right media selection and cabling topology will increase your productivity.

A SMART BUILDING APPROACH

FIXED LINE VOICE AND DATA

USER DEVICE MOBILITY

COLLABORATION AND CONFERENCING

SURVEILLANCE AND ACCESS CONTROL

BUILDING ENVIRONMENTAL CONTROLS

DATA CENTER

WHAT WE HEAR
Challenges from the various commercial building stakeholders are:

Keeping up with **EVOLVING TECHNOLOGIES**

AMORTIZATION of cabling systems

Supporting multiple **APPLICATIONS**

Reducing network **DOWNTIME**

Coping with **INCREASING BANDWIDTH**

## Infrastructure as a Platform
by Anixter

INTERNET OF THINGS
By 2020, **26 billion devices** will be connected to the Internet, adding **$1.9 trillion** in global economic value through sales into diverse end markets.

Source: Forbes. G. Press, Internet of Things By The Numbers: Market Estimates and Forecasts. 2015.

ANIXTER

Infrastructure as a Platform by Anixter offers a standards-based, physical layer approach that provides a foundation to meet the high-performance networking demands of your commercial building.

VERSATILE PHYSICAL LAYER CONNECTIVITY
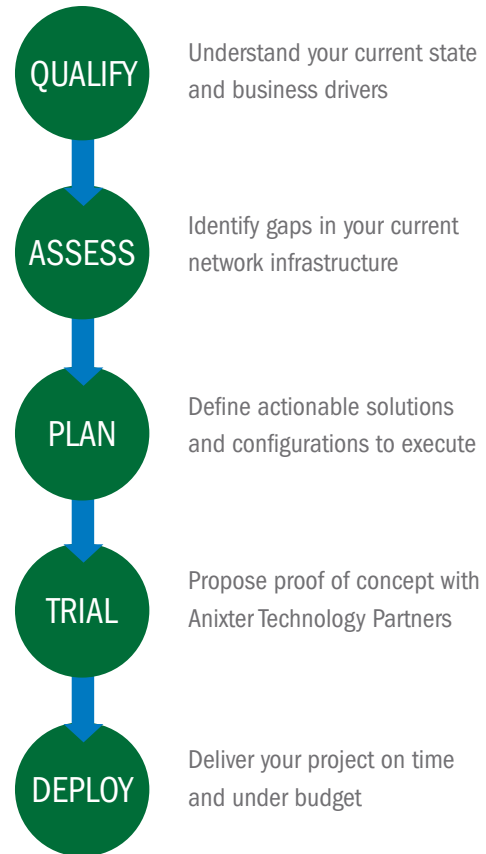**The Anixter Approach**
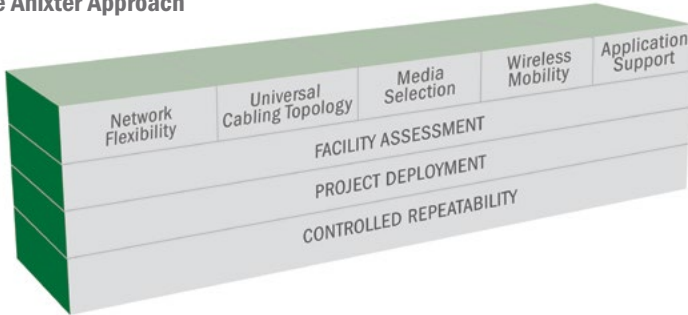
Anixter understands that in order to achieve a high-performance, future-ready structured cabling system, you need to consider the right combination of network architecture, performance, distance and density requirements.

- **Network Flexibility**
  Apply open architecture designs to accommodate your performance requirements for a highly scalable network.

- **Universal Cabling Topology**
  Determine the right choice for an open architecture environment by adopting commercial building wiring and building automation standards.

- **Media Selection**
  Choose the appropriate physical media from twisted-pair, optical fiber and direct-attach cables to address high-speed bandwidth requirements.

- **Wireless Mobility**
  Determine your migration path for Wi-Fi and in-building cellular connectivity to support a multi-screen environment.

- **Application Support**
  Deploy scalable designs that can support multiple and varied applications over a high-performance, IP-based structured cabling system.

YOUR CONNECTIVITY PLATFORM
Anixter Engagement Process

QUALIFY — Understand your current state and business drivers

ASSESS — Identify gaps in your current network infrastructure

PLAN — Define actionable solutions and configurations to execute

TRIAL — Propose proof of concept with Anixter Technology Partners

DEPLOY — Deliver your project on time and under budget

You can further strengthen your protective measures and enable interoperability by leveraging our expertise in technology sourcing, inventory management, product enhancement, logistics and eCommerce tools.

PRODUCT SOLUTIONS

- Copper and fiber cabling infrastructure
- Vertical and horizontal cable management
- Copper and fiber patch panels
- Copper work area outlets
- Zone wiring and consolidation points
- Copper and fiber patch cords
- Preterminated fiber trunk cables
- Infrastructure certification testing equipment

IDF Room

Micro Data Center

IT Operations Center

FOR MORE INFORMATION VISIT **ANIXTER.COM/COMMERCIALBUILDING**

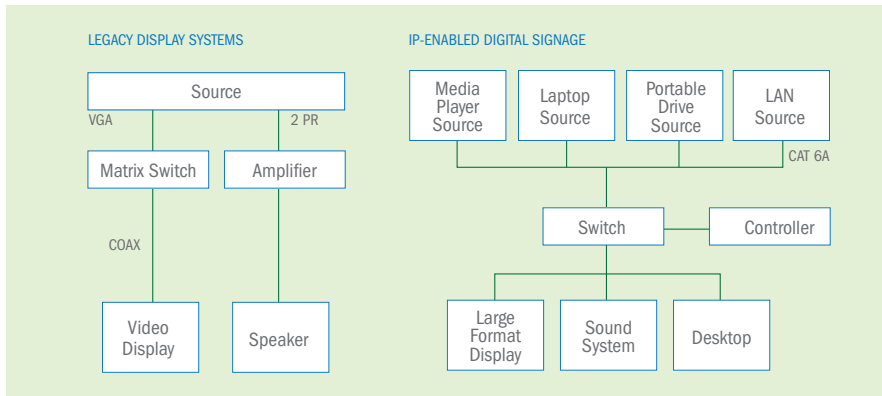Products. Technology. Services. Delivered Globally.

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Can you capitalize on the tech skills of tomorrow's workforce?
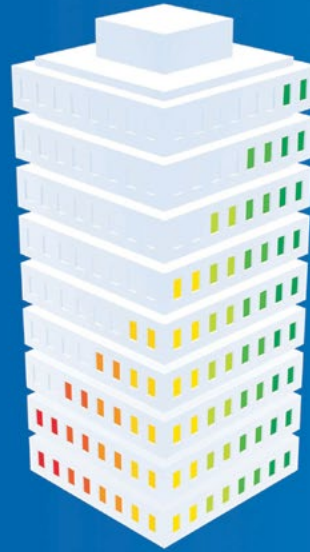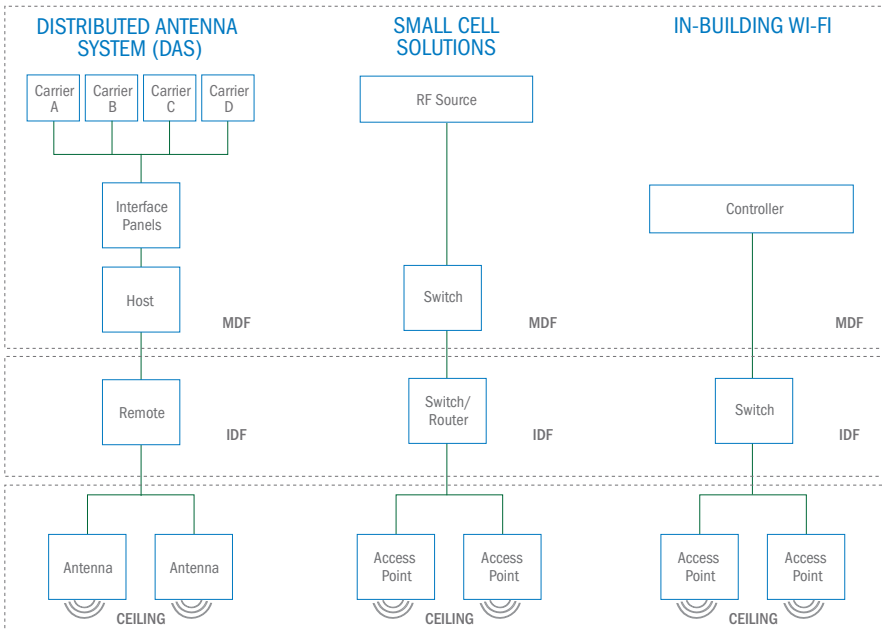
COMMERCIAL BUILDING WORKFORCE PRODUCTIVITY

Social and economic drivers are placing a larger focus on how workforce behavior can be improved with technology. Adequate bandwidth is required to facilitate the explosion of high-definition video and the new ways people deliver and consume information.

DIGITAL SIGNAGE TOPOLOGY

LEGACY DISPLAY SYSTEMS

Source
- VGA
- 2 PR

Matrix Switch — Amplifier

COAX

Video Display — Speaker

IP-ENABLED DIGITAL SIGNAGE

Media Player Source — Laptop Source — Portable Drive Source — LAN Source

CAT 6A

Switch — Controller

Large Format Display — Sound System — Desktop

COMMON WIRELESS TECHNOLOGIES

DISTRIBUTED ANTENNA SYSTEM (DAS)

Carrier A | Carrier B | Carrier C | Carrier D

Interface Panels

Host — MDF

Remote — IDF

Antenna — Antenna — CEILING

SMALL CELL SOLUTIONS

RF Source

Switch — MDF

Switch/ Router — IDF

Access Point — Access Point — CEILING

IN-BUILDING WI-FI

Controller

MDF

Switch — IDF

Access Point — Access Point — CEILING
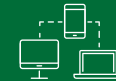
WHAT WE HEAR
Challenges from the various commercial building stakeholders are:

- Supporting a **BYOD** environment

- Providing seamless **NETWORK AVAILABILITY**

- Achieving **REGULATORY COMPLIANCE**

- Restrictions of **LEGACY SYSTEMS**

- Enabling **COLLABORATIVE** business communication

Infrastructure as a Platform
by Anixter

Infrastructure as a Platform by Anixter provides a practical, configurable and integrated approach to support advanced mobility and communications in your commercial building.

ADVANCED MOBILITY AND COMMUNICATIONS
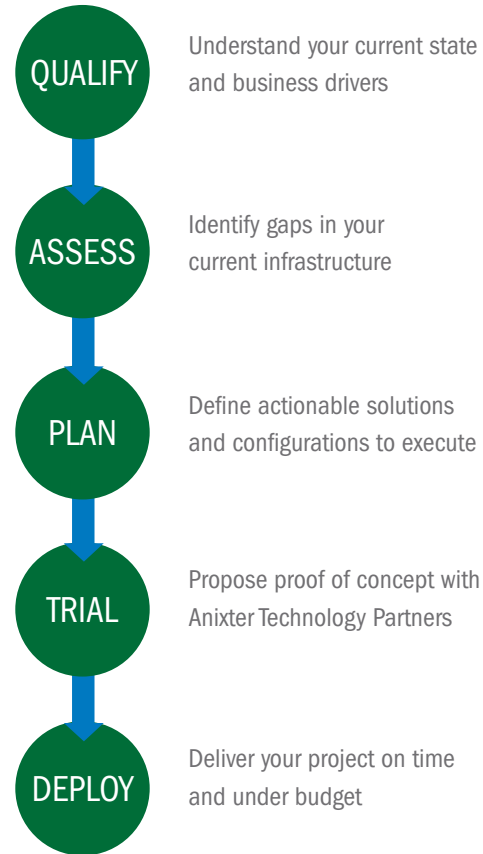**The Anixter Approach**
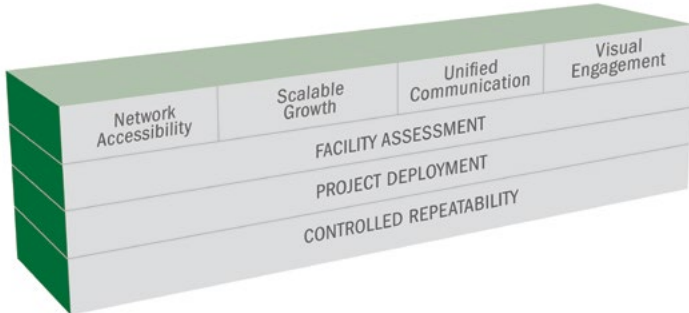
Our approach provides a clear set of guidelines and best practices for supporting advanced mobility throughout the building.

- **Network Accessibility**
  Apply designs to accommodate your performance requirements and overall cellular coverage in your building.

- **Scalable Growth**
  Determine the right choice to support the capacity increases of a BYOD and multi-device environment.

- **Unified Communication**
  Choose the appropriate communications equipment to provide a high-quality voice, data and video experience for employees.

- **Visual Engagement**
  Capture the attention of staff and visitors and deliver vital information through digital signage and mass notification solutions.

YOUR WORKFORCE PRODUCTIVITY PLATFORM
Anixter Engagement Process

QUALIFY — Understand your current state and business drivers

ASSESS — Identify gaps in your current infrastructure

PLAN — Define actionable solutions and configurations to execute

TRIAL — Propose proof of concept with Anixter Technology Partners

DEPLOY — Deliver your project on time and under budget

You can further strengthen your network performance and enable interoperability by leveraging our expertise in technology sourcing, inventory management, product enhancement, logistics and eCommerce tools.

PRODUCT SOLUTIONS

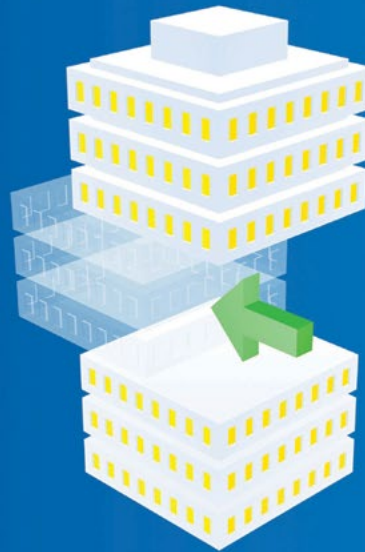- Distributed Antenna Systems
- Small Cell technology
- Wi-Fi
- VoIP telephones
- Wired and wireless headsets
- Audio conferencing equipment
- High-definition large-format displays
- Networked digital signage infrastructure
- Mass notification systems

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How do you achieve more with less when optimizing your real estate?
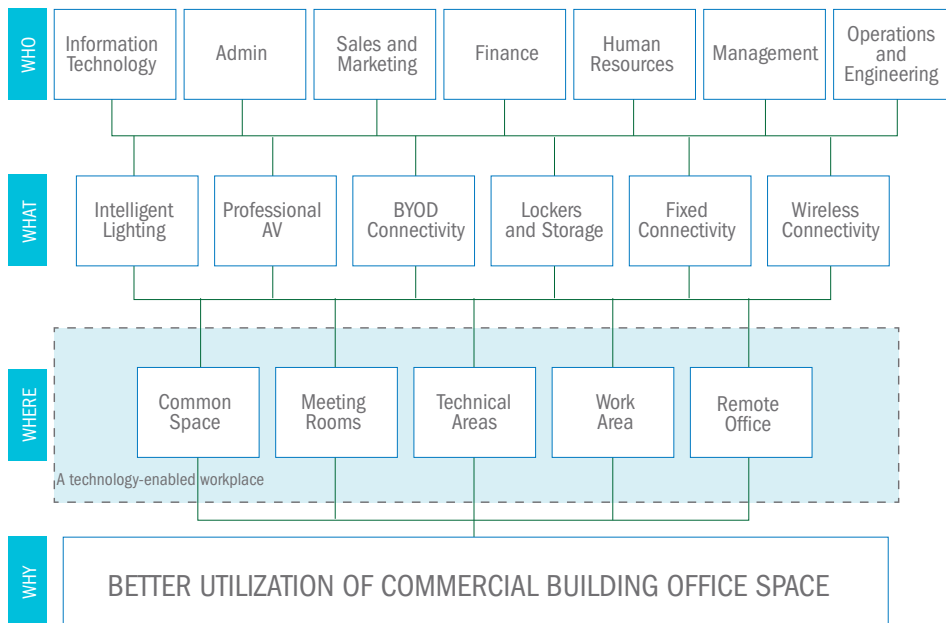
COMMERCIAL BUILDING SPACE UTILIZATION

With more employees concentrated in smaller spaces and increased demand for dynamic, collaborative areas, the need to optimize space is important for the productivity and efficiency of employees as well as the building itself.

A TECHNOLOGY-ENABLED WORKPLACE

In order to optimize real estate effectiveness, you must determine WHO will utilize WHAT technology.

Then determine WHERE this technology will be located, allowing you justify WHY this will benefit overall business productivity.

WHO | Information Technology | Admin | Sales and Marketing | Finance | Human Resources | Management | Operations and Engineering

WHAT | Intelligent Lighting | Professional AV | BYOD Connectivity | Lockers and Storage | Fixed Connectivity | Wireless Connectivity

WHERE | Common Space | Meeting Rooms | Technical Areas | Work Area | Remote Office
A technology-enabled workplace

WHY | BETTER UTILIZATION OF COMMERCIAL BUILDING OFFICE SPACE

WHAT WE HEAR
Challenges from the various commercial building stakeholders are:

ADAPTING to a changing workforce

Growing **COST** of real estate

Rising **ENERGY** costs

Offering **FUNCTIONAL MEETING** environments

Meeting staff **COMFORT REQUIREMENTS**

A recent survey of commercial real estate managers showed a significant trend towards down-sizing portfolios in the coming year.

**63%** expect portfolios to contract

25% expect portfolios to stay the same

12% expect portfolios to grow

Source: CoreNet Global, Reducing the Portfolio and Maximizing the Use of Existing Space. 2015.

Infrastructure as a Platform
by Anixter

Infrastructure as a Platform by Anixter provides a practical, configurable and integrated approach to optimize real estate effectiveness in your commercial building.

OPTIMIZE REAL ESTATE EFFECTIVENESS
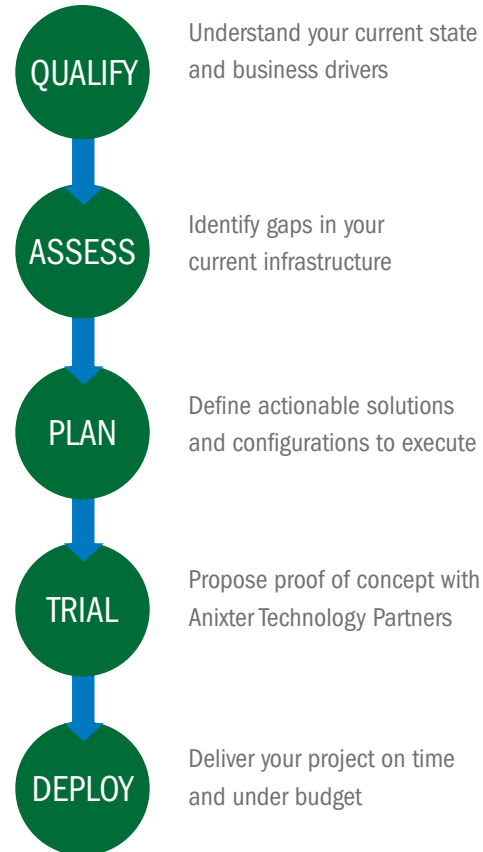**The Anixter Approach**
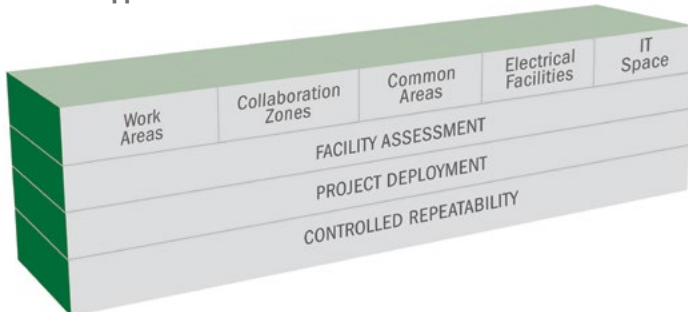
Our approach provides a clear set of guidelines and best practices for optimizing various spaces throughout the building.

- **Work Areas**
  Create open and flexible work areas that can support permanent and visiting staff.

- **Collaboration Zones**
  Provide dynamic environments that simplify sharing of content and conferencing demands.

- **Common Areas**
  Establish consistent communication and connectivity in high-traffic parts of the building.

- **Electrical Facilities**
  Monitor room-by-room electricity consumption and performance with intelligent power solutions.

- **IT Space**
  Plan for the appropriate floor space to support telecommunications rooms, data centers and IT resources.

YOUR SPACE UTILIZATION PLATFORM
Anixter Engagement Process

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You can further enhance collaborative areas and enable interoperability by leveraging our expertise in technology sourcing, inventory management, product enhancement, logistics and eCommerce tools.

PRODUCT SOLUTIONS
- LED controllable lighting
- Intelligent locker systems
- Distributed Antenna Systems
- Small Cell technology
- Wi-Fi
- Audio conferencing equipment
- High-definition large-format displays
- Networked digital signage infrastructure
- Mass notification
- HD BASE-T transmission

Work Areas | Collaboration Zones | Common Areas
Electrical Facilities | IT Space | Common Areas

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Is your building ready for the benefits of an IoT environment?
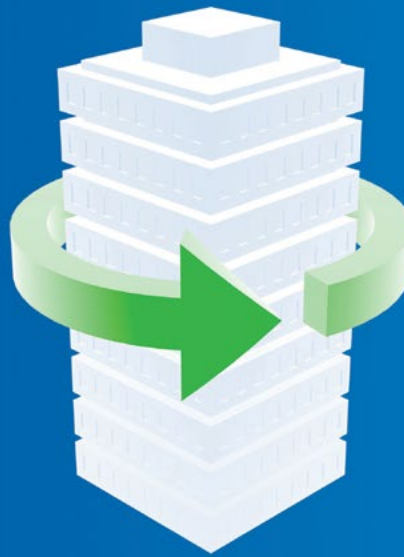
COMMERCIAL BIoT™ ENABLEMENT

Enabling the Building Internet of Things (BIoT) allows you to analyze your environment, and make real-time adjustments to improve efficiency and productivity.

Some building owners and operators can be frustrated with the lack of interoperability and integration between infrastructure management tools and current IT systems.

FAMILIAR CHALLENGE: OPERATING IN SILOS

Infrastructure management systems between facilities and IT can operate in silos, whereby functions overlap but don't talk to each other, resulting in poor workflow practices.

CONCEPTUAL DIAGRAM OF DISPARATE SUBSYSTEMS

IT

| Server Hardware | SMS | | Business Applications | APM | | Switch Fabric | NMS |

Server Management Systems

Application Performance Management

Network Management Software

Infrastructure Management — IPM

Building Management Systems

Video Management Software — Video Surveillance — VMS

Power Management Software — Facility Power — PMS

Lighting Control Software — Facility Lighting — LCS

Access Control Software — Access Control — ACS

Building Control Software — Heating, Ventilation and Air Conditioning — BCS

Health and Safety Software — Fire and Life Safety — HSS

FACILITIES

WHAT WE HEAR
Challenges from the various commercial building stakeholders are:

- Interdepartmental **CONFLICT**
- Supplier **INTEGRATION** competency
- **MIGRATING** to an IP platform
- Justifying the cost of **EFFICIENCY**
- Limitations of **EXISTING INFRASTRUCTURE**

By 2020, one in five buildings will be smart buildings, supporting **50 billion** connected devices, with cloud-based software and services growing at a rate of **33 percent.**

Source: Memoori, Big Data for Smart Buildings: Market Prospects 2015 to 2020.

Infrastructure as a Platform
by Anixter

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Infrastructure as a Platform by Anixter provides a comprehensive approach to maximizing the potential of an automated building, which starts at the physical layers, by simplifying deployment and integration with your business processes.

FIVE SENSES OF AN INTELLIGENT BUILDING
The Anixter Approach
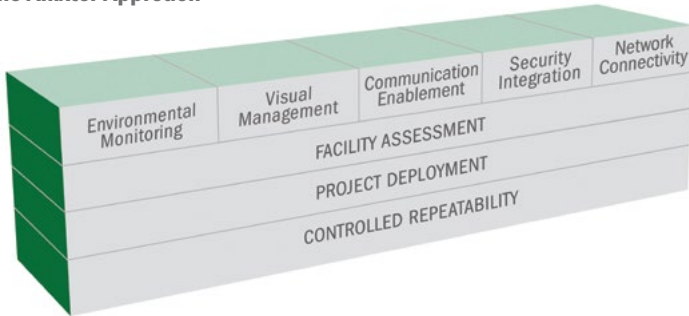
By defining the various elements that provide valuable information about your building, Anixter will tailor a solution that meets your specific challenges.

- **Environmental Monitoring**
  Use occupancy, intelligent lighting, power and temperature sensor technology to achieve optimal comfort and energy efficiency.

- **Visual Management**
  Support centralized management of content through integration of digital signage, projection technology and mobile devices.

- **Communication Enablement**
  Adopt a flexible wired and wireless network architecture to integrate voice, data and video experience.

- **Security Integration**
  Create interoperability between video surveillance, access control and intrusion detection systems.
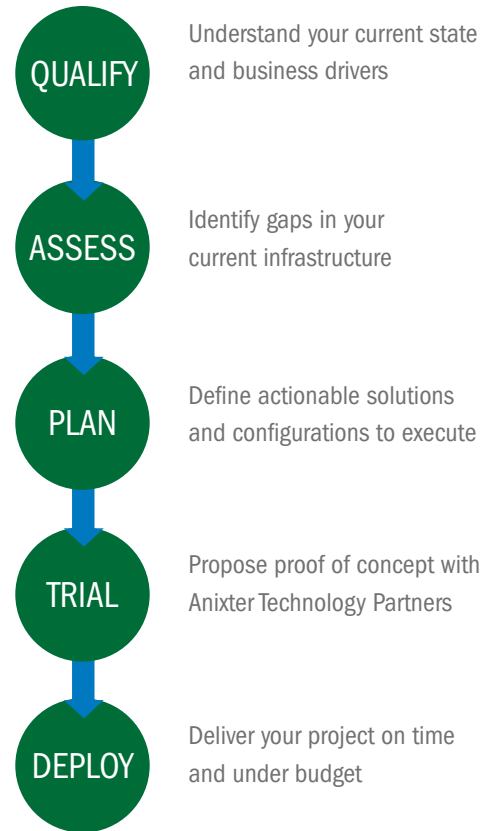
- **Network Connectivity**
  Provide a standards-based IP platform that can run multiple applications, and be remotely managed and measured.

YOUR BIoT PLATFORM
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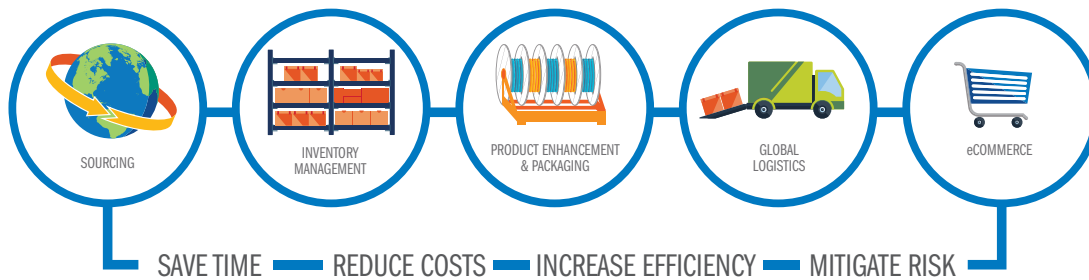
PRODUCT SOLUTIONS

- Intelligent PDUs
- Inline power meters
- Asset collection services and software
- Intelligent patch panels
- Temperature and humidity sensors
- Power and thermal management software

- Video management software
- Video analytics
- Access control software
- Intelligent patching
- Intelligent LED lighting
- Occupancy sensors
- Eco-mode UPS
- Network analysis tools
- Network management software

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At Anixter, we enable the connected world. By building, connecting, protecting and powering valuable assets and critical infrastructures, we help to sustain and grow businesses and communities worldwide. We accomplish this by offering full-line solutions, technical intelligence, supply chain expertise and an unmatched global distribution network.

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ANIXTER SUPPLY CHAIN SOLUTIONS: Reducing costs, saving time, improving productivity and mitigating risks – it's our goal on every project. With our customizable Supply Chain Solutions, you can eliminate costs, address sustainability requirements, enhance focus on your core competencies and stay competitive in the marketplace. For more information, contact your local Anixter sales representative or visit **anixter.com/services.**

SOURCING — INVENTORY MANAGEMENT — PRODUCT ENHANCEMENT & PACKAGING — GLOBAL LOGISTICS — eCOMMERCE

SAVE TIME — REDUCE COSTS — INCREASE EFFICIENCY — MITIGATE RISK

TECHNOLOGY ALLIANCE PARTNERS[SM]**:** Anixter's Technology Alliance Partners provide solutions designed to connect the world's most important systems. Our partners help organizations operate more efficiently and securely while maximizing value.

APC by Schneider Electric · BELDEN SENDING ALL THE RIGHT SIGNALS · Berk-Tek A NEXANS COMPANY · BOSCH Invented for life · CHIEF · COMMSCOPE

CORNING · CHATSWORTH PRODUCTS · CREE · DA-LITE · EATON · HID · IRIS ID Advanced Identity Authentication

KRAMER · LEVITON · legrand · NEC · NETSCOUT · PANDUIT · RFS

SUPERIOR ESSEX · TRIPP·LITE · TZ · VIAVI

GLOBAL REACH.
LOCAL ADVANTAGE.

With Anixter, you get a true local partner around the world. No other distributor of our kind can claim an in-country presence in approximately 50 countries and in over 300 cities.

We do business in more than 35 currencies and 30 languages, which means we are uniquely positioned to help facilitate your project in the local environment, reduce risks and keep costs down.

YEAR FOUNDED **1957**

APPROXIMATELY **8,700** EMPLOYEES

APPROXIMATELY **50** COUNTRIES

OVER **125,000** CUSTOMERS

APPROXIMATELY **320** WAREHOUSES/BRANCHES

OVER **$1.1 BILLION** INVENTORY

IN OVER **300** CITIES

STOCK SYMBOL **AXE**

OVER **450,000** PRODUCTS

FORTUNE **500** COMPANY

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Legal Statement: anixter.com/legalstatement

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