Smart for the new normal

Smart Buildings – delivering operational excellence and enhanced occupant experience

www.usa.siemens.com
By 2030, millennials will make up 75% of the workforce, driving new work models and flexible work spaces.

On average, 30% of energy is used inefficiently or unnecessarily.

Up to 33% of commercial real estate space is unused or underutilized.

Operating costs can add up to 80% of a building’s life cycle costs.

Due to competition for talent, 40% of companies have difficulties in retaining employees.

Facilities staff spend over 45% of every day troubleshooting problems and managing repairs.

High performance buildings create up to a 9% increase in employee productivity.

Occupant productivity, retention and wellness benefits may deliver an annual profit of $18.56 per square foot.

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2. US EPA
3. IMB Institute for Business Value
4. Greenspace, NCR Inc
7. Stok: The financial case for high-performance buildings
8. Stok: The financial case for high-performance buildings
Smart for the New Normal

Smart “Connected” Buildings capture data, generate insights, optimize performance and contribute to your organization’s goals… delivering the ideal occupant experience.

1. From your home
   - Check the availability of official desk space using the Comfy app
   - Book your preferred workspace
   - Check transit schedule with the Comfy app before leaving home

2. Arriving at work
   - Use the Comfy app to locate the entrance and securely enter the building
   - Enter the office building with the safety of others in mind via temperature monitoring
   - An elevator is automatically called for taking you to your office floor
   - Adjust your workspace to your personalized temperature and lighting preferences

3. Find colleagues and book meeting rooms
   - Use your Comfy app to find a colleague and enter a healthy, decontaminated meeting room
   - Use the Comfy app to book meeting rooms
   - Find a meeting room and book instantly
   - Locate equipment needed for meeting
   - Join your colleague and enter a healthy, decontaminated meeting room

4. After the meeting
   - Use the Comfy app to notify facilities
     - If a lost item left in the meeting room
     - If lamps that are not on, check that they are broken, etc.
     - If the room needs cleaning. Valuable in COVID conditions
     - Calendar system means there is time between meetings to properly decontaminate the room

5. Leaving for the day
   - Use the Comfy app to locate the entrance and securely exit the building
   - Use the Comfy app to locate the nearest emergency exit
   - Use the Comfy app to check transit schedules
   - Exit office and arrive at a waiting elevator

Healthy Environments
- Check building occupants’ skin temperature
- Decontaminate office space with ionization technology
- Provision employees with contact tracing
- Leverage IoT to manage the level of building occupancy and density
- Maintain air quality and ventilation

Sustainability
- Power your building with resilient and sustainable onsite power, with battery storage and microgrid control
- Pursue Industry Certifications (GSA, Green Star, WELL Buildings)
- Save water with high efficiency irrigation
- Monitor CO2 emissions via environmental monitoring
- Integrate into renewable energy sources

In the event of an emergency...
- If the power goes out
  - (The building's microgrid seamlessly takes control of the building's power)
- If there’s a fire
  - The fire department is automatically notified
  - Sensors are activated
  - Mass notification leads occupants safely out of the building
  - IoT sensors locate people still in the building
  - Suppression system extinguishes the fire
- After the incident, detailed information on building systems and response can be accessed

Employee Experience
- Set workers’ ideal environment
- Provide safe and secure buildings with fire and security systems
- Reserve preferred office/workspace
- Obtain emergency walk-ins & corporate notifications
- Change cars with UV clashing that is led directly into the building management system
- Ensure electrical safety with reliable and wide range power quality and efficiency to drive reliability and reduce energy costs

Reduced Construction Costs
- Leverage the-Construction planning and services
- Save using factory pre-encapsulated solutions and Design Assist
- Create a technology master plan
- Lower construction costs using a converged network

Connecting people, data and systems to optimize occupant experience and building operations
Healthy Environments
- Check building occupants’ skin temperature
- Decontaminate office space with ionization technology
- Supports efforts to protect employees via contact tracing
- Leverage IoT to manage the level of building occupancy and density
- Maintain air quality and ventilation

Sustainability
- Power your building with resilient and sustainable onsite power, with battery storage and microgrid control
- Pursue Industry Certifications (LEED, Energy Star, Well Buildings)
- Save water with high efficiency irrigation
- Monitor CO2 emissions via environmental monitoring
- Integrate into renewable energy sources
- Charge cars with EV charging that is tied directly into the building automation system
- Get the energy metering data you need for energy reduction programs

Employee Experience
- Set worker’s ideal environment conditions using the Comfy app
- Provide safe and secure buildings with fire and security systems
- Reserve preferred office / workspace
- Obtain emergency warnings & corporate notifications
- Charge cars with EV charging that is tied directly into the building management system

Reliable and Efficient Power
- Safeguard uninterrupted, secure, critical power with microgrids and complete systems for onsite power generation including emergency or standby power, peak shaving/load curtailment, utility paralleling, cogeneration, and prime power
- Remotely and safely configure, control and monitor the electrical infrastructure
- Fully integrate monitoring to ensure full operability even with limited staff
- Ensure electrical safety with reliable low- and medium-voltage power distribution
- Improve power quality with fault notifications that alert the building system within milliseconds.
- Expert service engineers on call 24/7

Lower Operating Costs
- Reduce maintenance with preventative, predictive and digital services
- Utilize intelligent lighting and temperature control
- Use the energy you need, when you need it – with advanced meters and controls
- Measure, monitor and analyze power quality and efficiency to drive reliability and reduce energy costs
- Realize savings through energy procurement services
- Access real-time/historical energy data to identify potential ways to reduce costs
- Integrate disparate building systems to obtain system interoperability
- Maximize office space utilization

Reduced Construction Costs
- Leverage Pre-Construction planning and services
- Save using factory preconfigured solutions and Design Assist
- Create a technology master plan
- Lower construction costs using a converged network

Connecting people, data and systems to optimize occupant experience and building operations