Use Case – OpenBlue Patient Room Optimization

The power behind **your mission**

Johnson Controls

Challenge: Engage patients and enhance staff productivity

Smart patient rooms increase comfort and convenience — with additional far-reaching benefits. Patients can **control their surroundings** safely from bed, by voice or app, decreasing the risk of falls and wandering. And with patients and their families able to adjust temperature, lighting, and media, staff can **focus on clinical care**. The result is **enhanced efficiency, patient safety, and clinician job satisfaction**.

Pain Points

- Patients become irritated waiting for staff to change room features
- Uncomfortable, anxious patients are less engaged in health decisions
- Unfamiliar surroundings make it challenging for patients to relax and heal
- Patients risk falls and other dangers if they get out of bed to adjust room settings
- Staff must spend care time adjusting lighting, temperature, TV and music
- Energy savings decrease
- Costs per patient increase

Solution: Give patients more control with OpenBlue Patient Room Optimization

OpenBlue Patient Room Optimization lets patients control temperature, lights, shades, and room entertainment systems, and access meal ordering and concierge services. Voice-activated room controls work separately or with technologies already in use. Personalizing the room with patient preferences upon admittance increases patient satisfaction and boosts staff efficiency.

Features

- Select room settings before admission
- Safety-focused, voice-activated controls via a digital device like Amazon's Echo (Alexa)
- Integration with digital thermostats for adjustable room temperature
- Support for smart lighting systems
- Access to entertainment options, including preferred music streaming
- Controls for electronic window shades
- Integration with patient meal ordering solutions
- Room occupancy alerts and settings reset between patients
- Compatibility with various mobile apps for streamlined digital solutions
- HIPAA-compliant anonymized patient identifier
- Code Blue optimization

Enabling Technologies

- LAN/Wireless
- ADT System (Admit Discharge Transfer)
- Room Entertainment System
- Patient Communication System Nurse Call System
- Lighting control
- BMS control
- Shade control

Return on Investment

- Greater operational efficiency
- Enhanced patient safety
- Greater patient satisfaction, with higher net promotor scores
- Improved staff productivity
- Improved HCAHPS score
- Enhanced hospital image
- Improved staff job satisfaction

Results: Enhance the patient experience at every opportunity

Increased Engagement

Help patients feel more comfortable and in control of their surroundings. Enhance safety, reducing patient fall risk. Personalized rooms also support more individualized care. Patients are better positioned to engage in health decisions.

Improved Productivity

Staff can focus on clinical aspects of patient care and respond more quickly to care needs, rather than spending time on room adjustments.

Rapid Code Blue Response

The critical response team can focus immediately on the patient, rather than the room environment, saving time when every second may affect patient outcomes.

Operational Savings

Remote access to room settings and functions optimizes staff productivity as well as patient throughput and room turnover.

Integrated Technology

App-based controls increase patient involvement while still enabling staff to override settings. Digital tools provide greater connectivity, with seamless interoperability among business, building and clinical systems.

Cybersecurity

Adherence to strict cybersecurity protocols helps protect patients and data.

HIPAA Compliance

Unique patient identifiers enable room personalization. These identifiers are anonymized for HIPAA compliance.

OpenBlue Patient Room Optimization: How it works

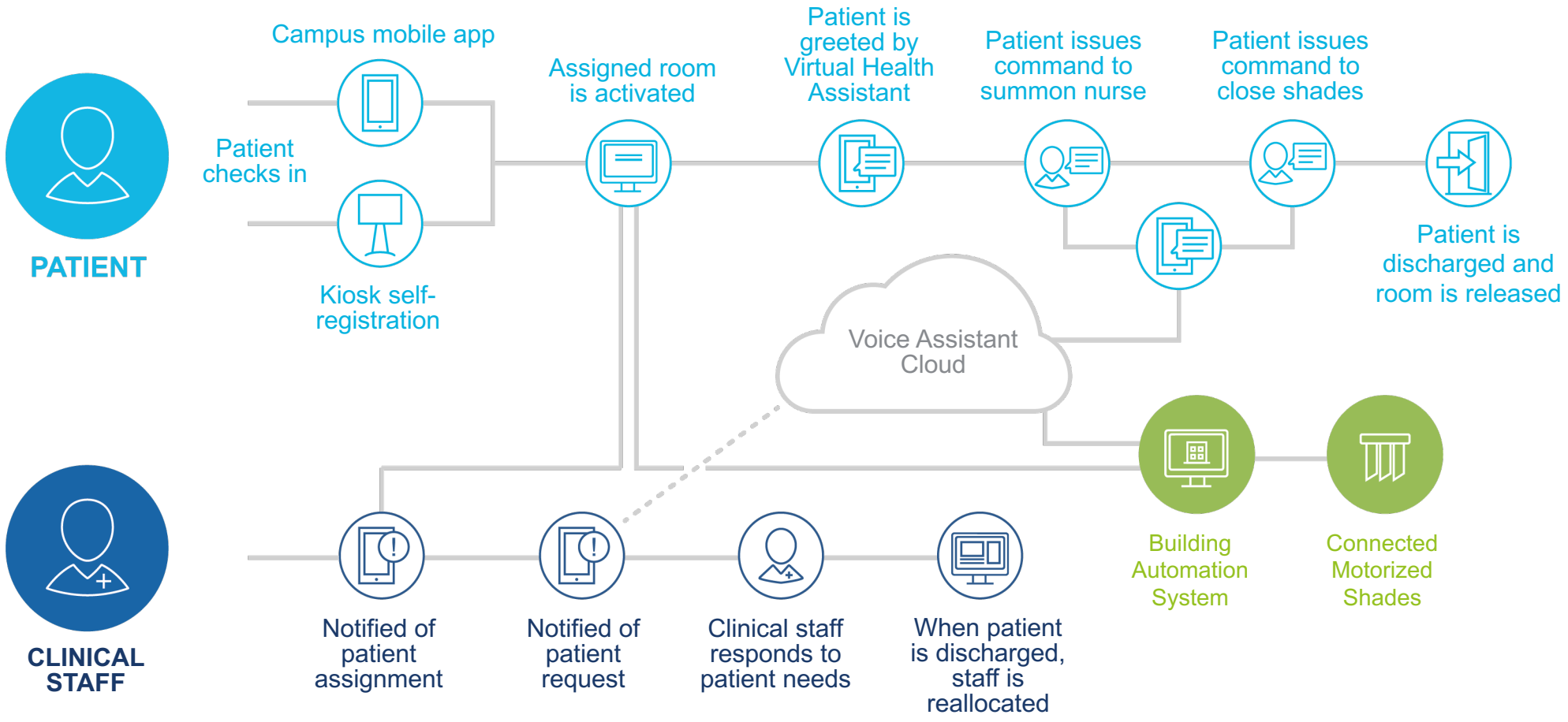
PATIENT

- Admitted to care facility
- Patient information is relayed securely to smart room
- Patient receives information about activation and personalization
- Patient can control surroundings and send requests
- Patient is discharged. Records are archived, and room is securely reset.

CLINICIAN

- Notified that patient has entered the hospital or patient room
- Assigned to patient's care team. Orients patient to room and smart room features.
- Can focus on meaningful patient requests in a timely manner
- Patient is discharged. Room is automatically prepared for next patient.

OpenBlue Patient Room Optimization: Solution architecture



Use Case – OpenBlue Code Blue Optimization

The power behind **your mission**

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Challenge: Speed response when every second counts

In a Code Blue medical event, **precision**, **efficiency and focus on the patient** matter — and so does the environment where lifesaving measures unfold. Optimizing room conditions such as **lighting**, **temperature**, **privacy and noise** builds a foundation for the **best possible outcomes**.

Pain Points

- Response delays, including finding and adjusting features in the patient's room
- Distractions from focusing on patient care
- HVAC system lag in changing zone temperature
- Lack of ready access to patient information
- Potential negative patient outcomes

Solution: Save critical time with OpenBlue Code Blue Optimization

OpenBlue Code Blue Optimization speeds staff response when every second is key to patient survival. Nearby qualified responders receive immediate notifications with patient status, as well as room number to help with wayfinding. Automated controls shift room features to the optimal setting. And the healthcare team is free to focus immediately and fully on assessing, resuscitating, and otherwise stabilizing the patient.

Features	Enabling Technologies	Return on Investment
▪ One button activates all features ▪ Nearest responders identified ▪ Signage triggered for fast wayfinding ▪ Care team notifications with room number and staff arrival status ▪ Patient event dashboard including meals, medications, allergies ▪ Automated HVAC zone temperature change ▪ Automated controls for lighting, TV, shades and room settings ▪ Fully configurable menu ▪ Interoperability with current systems	▪ LAN/Wireless ▪ Room Entertainment System ▪ Lighting control ▪ BMS integration ▪ Shade automation ▪ HVAC automation ▪ Real-Time Location Services ▪ Notification Services	▪ Improved safety ▪ Greater operational efficiency ▪ Improved critical response team productivity ▪ Greater patient satisfaction, with higher net promotor scores ▪ Improved HCAHPS score ▪ Enhanced hospital image

Results: Enhance care, efficiency and satisfaction with Intelligent Code Blue

Improved patient care

The critical response team can focus immediately on the patient, rather than the room environment, saving time when every second may affect patient outcomes.

More efficient staff notifications

Advanced messaging, alarms and notification lookups quickly notify critical response team members for participation in person or by video.

Streamlined room control

Room devices can be monitored and controlled without human intervention. OpenBlue Code Blue Optimization automates the change to optimal room conditions, supporting the potential for positive outcomes.

Integrated technology

Fully digital, app-based controls adjust the patient room technologies automatically. Digital tools minimize physical touches by staff and patients, while increasing flexibility with options such as broadcasting a collaboration video to the room's TV. Menus are fully configurable, and features work with existing technology.

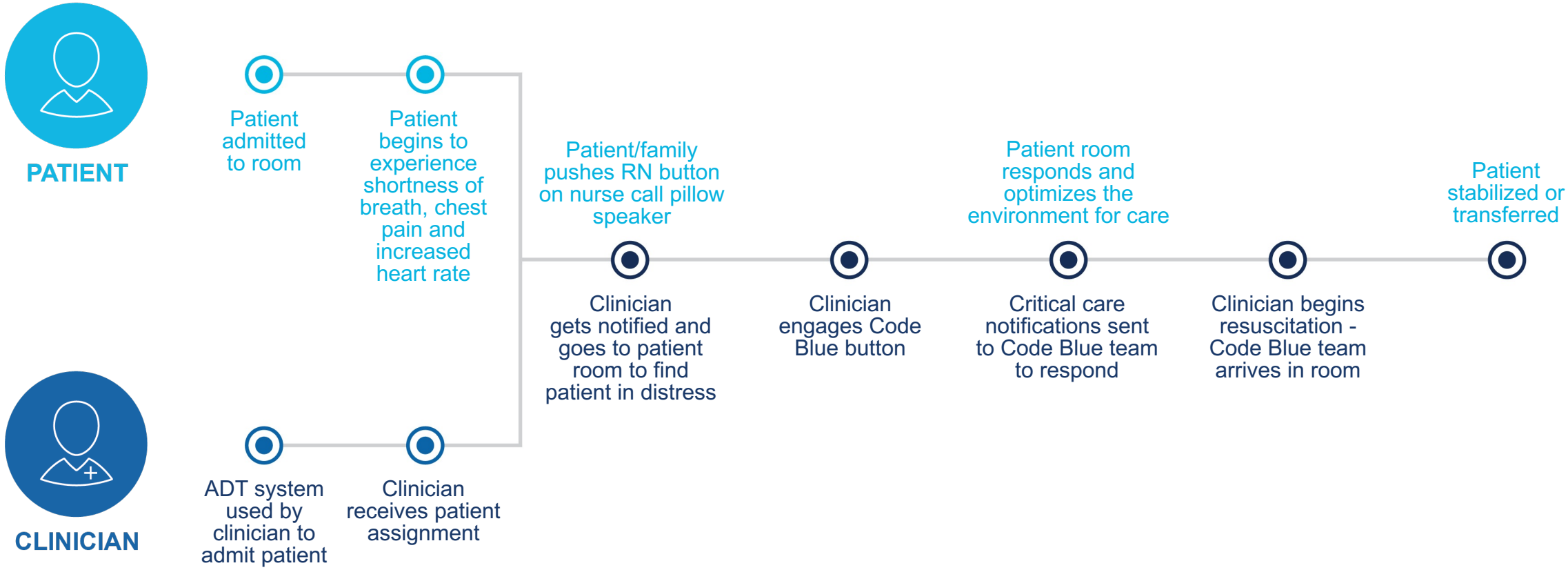
Enhanced emergency team efficiency

Optimizing Code Blue response increases staff satisfaction and promotes more effective collaboration among in-person and video participants.

Optimized outcomes

As patient care improves, patient and staff satisfaction increases and the hospital's positive reputation grows.

OpenBlue Code Blue Optimization: How it works



Solution architecture